

NEW BOOKLETS AND LEAFLETS

Direct Advertising of manufacturers received recently.

Belding-Hall

Copies of new catalogs showing the 1928 line of domestic and commercial refrigerators manufactured by the Belding-Hall Co., Belding, Mich., have been received. The domestic catalog contains photographs and specifications of the enlarged line of porcelain models. Forty-four pages are devoted to the various models and their specifications.

Catalog number 27 contains illustrations and specifications on refrigerators for grocery stores, hotels, cafes and meat markets. In addition to these two catalogs a number of loose leaves have been received showing domestic cabinets, especially designed for electric refrigeration.

Benjamin

Loose leaf sheets have been received from the Benjamin Electric Mfg. Co., 120 Sangamon St., Chicago, illustrating and giving specifications on Benjamin all-porcelain Crysteel cabinets and all-porcelain apartment cabinets. The models shown are especially designed for electric refrigeration. Each cabinet of the Crysteel line is shown with doors both open and closed. The models shown range in size from 5.5 cubic feet to 18.5 cubic feet net food storage space.

The sheets covering the apartment models show these cabinets with doors both open and closed and on the reverse side carry blue print diagrams indicating dimensions necessary for each model in built-in installations.

Cork Import

From Cork Import Corp., 345 West 40 St., New York City, comes a bulletin telling the story of how Novoid corkboard is made and how it is used. A second folder has also been received telling of the applications of Novoid cork covering for refrigerated lines and tanks and drinking water systems.

Gibson

A catalog has been received from the Gibson Refrigerator Co., Greenville, Mich., describing the 1928 line of Gibson refrigerators. A number of different styles are shown, including the all-porcelain models and those with porcelain interior and oak exterior.

Lewis-Shepard

A catalog showing a number of different types of lift trucks and stacking machines has been received from the Lewis-Shepard Co., Watertown Station, Boston, Mass. Photographs show how these machines are used in various industries.

Maricold

Photographs and specifications on the Maricold display case are given in a catalog received from the Maricold Show Case Co., Marinette, Wis. A number of the models are shown equipped with electric refrigeration cooling units.

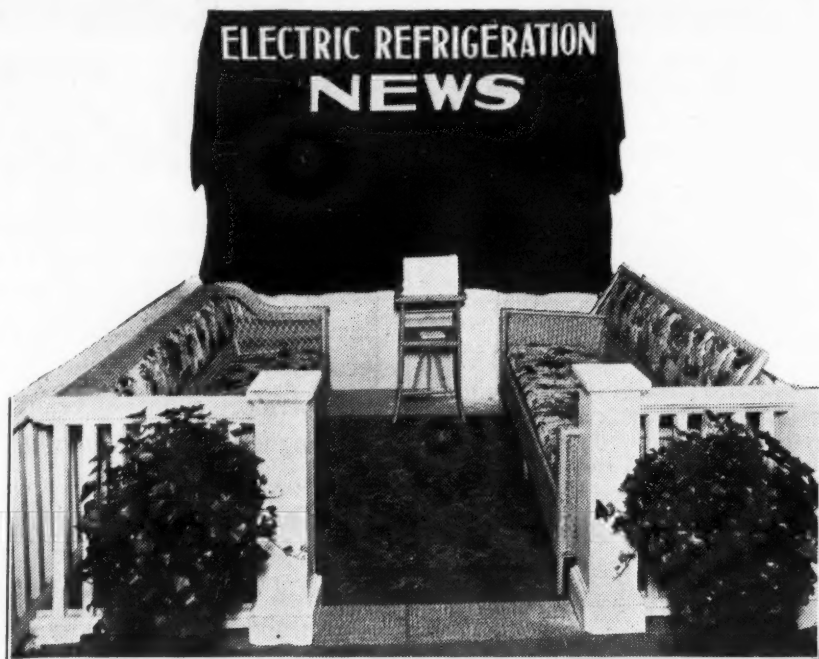
Utilities Engineering

The Utilities Engineering Institute, 3120 North Clark St., Chicago, Ill., sends in a booklet entitled "The New Giant Industry, Electric Refrigeration." The booklet tells of the possibilities for men trained in the field of electric refrigeration and describes a correspondence training course offered by the Institute.

N. E. L. A.

"First Aid and Resuscitation in Gas Poisoning, Electric Shock and Drowning" is the title of a booklet recently made available by the National Electric Light Association, Accident Prevention Committee. This book gives the standard technique for the prone pressure method recently adopted by a conference of 11 national organizations. Also included are instructions for dealing with gas, electricity and drowning cases.

The News Corner for N. E. L. A. Visitors



QUALIFICATIONS OF SALESMEN

P. B. Zimmerman, general sales manager of the Electric Refrigeration Department, General Electric Company, gives the following list of qualifications and characteristics as a suggested guide for employing salesmen:

1. Stamina—Can he stand the gaff?
2. Appearance.
3. Extreme height or weight.
4. Assimilation—can he interpret the sales program and policy?
5. Discouragement.
6. Industry.
7. Enthusiasm.
8. Technic of salesmanship.
9. Dependence—Is someone dependent upon him?
10. Belief in our product.
11. Reaction to contests—is he willing to be in competition with others?
12. Reaction to profit and loss—commission.
13. How many jobs has he had?
14. Pride.
15. Initiative and resourcefulness.

Grade sheets are furnished by the General Electric Company which break down the qualifications into groups and evaluate each one. For instance—stamina is 9 points, etc. Even if a man ranks zero on one point, he may rank high on the other qualifications. "Good average qualifications, grit and gumption usually make successes," says Mr. Zimmerman.

COPELAND BUSINESS IN MAY SHOWS 68 PERCENT INCREASE OVER LAST YEAR

An increase of 68 percent over May 1927, is reported by the Copeland Products, Inc., Detroit, manufacturers of electric refrigeration. Unfilled orders on May 21 showed an increase of 117 percent over those of the same date a year ago, W. D. McElhinny, vice-president in charge of sales, stated. "Business conditions, according to our reports from throughout the entire United States, show a general state of prosperity. Electric refrigeration is rapidly forging to the front and its installation is becoming general in large cities. At the same time, there is an increasing use in private homes, for our domestic unit sales are showing a large increase."

Subscription Order

ELECTRIC REFRIGERATION NEWS,
554 MACCABEES BUILDING, DETROIT, MICH.

Please enter my subscription to Electric Refrigeration News.

United States and Possessions:

☐ \$1.50 per year. ☐ Three years for \$3.00.

All other Countries:

☐ \$1.75 per year. ☐ Two years for \$3.00.

I am enclosing payment in the form of

☐ Check ☐ P. O. Order ☐ Cash

Name.....

Street Address.....

City and State.....

Remarks:

REGISTRATION ON OPENING DAY OF A. S. R. E. MEETING

Adams, Wm. H., 130 Farrand Pk., Highland Pk., Mich.
Aday, F. M., Hagerstown, Md.
Aurand, Edw. L., 2122 Seyburn, Detroit.
Authenrieth, Chicago, Ill.
Aubrey, W. H., Waynesboro, Pa.
Ayles, R. W.
Barnes Howard T., 1258 Metcalf St., Montreal, Ont.
Belshaw, 223 Gregory St., Dearborn, Mich.
Brick, E. G., Detroit, Mich.
Bright, Geo. B., Detroit.
Brown, J. R., 11810 Ohio Blvd., Detroit.
Bryselbout, Henri A., 16611 Welland St., Detroit.

Carrier, W. K., Essex Falls, N. J.
Churchill, J. B., Plympton, Mass.
Coggin, F. G., Detroit.
Coyle, Thos., 209 3rd St., Niagara Falls, N. Y.
Dennison, F. E., Beloit, Wis.
Diamant, N. S., 10228 Nardin Ave., Detroit.
Drushel, W. A., 1234 Logan St., E. Grand Rapids, Mich.

Eberlein, Wm. F., 5213 Larchmont, Detroit.
Edwards, H. D., Larchmont, N. Y.
Ellis, Don E., Detroit.
Farmer, Patterson, Detroit.
Finck, J. L., Washington, D. C.
Finnell, H. W., 300 Warren Ave., Chicago, Ill.
Fuller, F. M., N. Y. City.
France, A. W., Philadelphia, Pa.

Gay, Norman H., Los Angeles, Cal.
Gilbert, W. Van R., 3311 Dunn Rd., Detroit.
Gilbert, C. M., Cincinnati, O.
Harper, D. R., 3rd.
Harvey, W. G., Pittsburgh, Pa.
Haven, Chas. D., Detroit.
Heilman, R. H., Pittsburgh, Pa.
Hershey, F. B., Charlestown, W. Va.
Hilger, Geo. M., Chicago.
Hilger, Jr., Geo., 1534 W. 62nd St., Chicago.
Hilger, R. G.
Holland, A. Dinsmore, Atlanta, Ga.
Horr, Leonard W., LaGrange, Ill.
Huettnerman, Theo., Detroit.
Hayes, Harry C., Detroit.

Jamieson, Jr., J. V.
Jenks, L. Howard, Rutherford, N. J.
Johnson, O. R., Detroit.

Karr, Alfred D.
Keitholtz, L. S. Dayton, O.
Klunk, J. H., New York.
Knight, J. L., Schenectady, N. Y.
Knudson, I.
Kuenzli, W. A.

Lewis, H. I. Philadelphia.
Lipman, C. E. L., Beloit, Wis.

McKee, Thos. C., Detroit.
McLay, A. D., Detroit.
Miller, E. B., Baltimore, Md.
Moore, H. J., Detroit, Mich.
Morrison, L. H., New York, N. Y.
Motz, W. H., Chicago, Ill.
Mueller, E. J., Detroit, Mich.
Muffy, Glen, Detroit, Mich.

Nelson, R. G., Detroit, Mich.
Nickerson, J. F., Chicago, Ill.
Norman, Andrew, Buffalo.
Nortley, E. N., Waterloo, Ia.

Oakley, A. W., New York, N. Y.

Phillip, L. A., Ann Arbor, Mich.

Pope, H. L., Detroit.

Riddell, G. P., Detroit.

Riley, F. B., Detroit.

Seamon, B. E., Chicago.

Sloan, Harry, Milwaukee.

Small, N. M., Waynesboro, Pa.

Swart, R. H., Detroit.

Spreen, C. C., Detroit.

Stewart, F. C., Detroit.

Stewart, A. B., Indianapolis.

Taylor, H. F., New York, N. Y.

Tinke, O. G., Pittsburgh, Pa.

Wegner, G. A., Rochester, N. Y.

Williams, E. T., Brooklyn, N. Y.

Wilson, Fremont, New York, N. Y.

An Outstanding Sales Feature for REFRIGERATORS



E. J. WIRFS ORGANIZATION, Inc.
135 S. 17th St., St. Louis, Mo.

FOREIGN SHIPMENTS OF ELECTRIC REFRIGERATORS

April Exports Reported by
Bureau of Foreign and
Domestic Commerce

Country of Destination	Refrigeration Sets up to 1-Ton Capacity	Number	Value
Austria	25	\$ 5,634	
Denmark	48	10,593	
France	9	1,708	
Germany	44	7,506	
Hungary	22	5,626	
Italy	2	253	
Netherlands	43	8,285	
Norway	17	3,927	
Spain	119	35,047	
Switzerland	29	4,473	
United Kingdom	126	32,278	
Canada	2,252	327,116	
Costa Rica	3	966	
Panama	7	3,023	
Salvador	2	597	
Mexico	35	10,208	
Bermudas	3	465	
Jamaica	1	500	
Other British West Indies	1	180	
Cuba	47	11,231	
Dominican Republic	1	635	
Dutch West Indies	2	5,589	
Haiti, Republic of	4	973	
Virgin Island of U. S.	4	735	
Bolivia	1	435	
Brazil	121	29,334	
Colombia	34	7,144	
Peru	3	673	
Venezuela	12	2,466	
Aden	1	232	
Arabia	2	365	
British India	158	27,206	
British Malaya	1	565	
China	6	2,570	
Java and Madura	7	1,500	
Hong Kong	3	617	
Japan	6	1,842	
Philippine Islands	96	19,402	
Syria	1	365	
Australia	53	8,402	
New Zealand	4	613	
British East Africa	4	963	
Union of South Africa	19	5,994	
British West Africa	2	250	
Egypt	25	4,734	
Total		3,405	\$593,220

G. E. Agent at St. Petersburg, Fla., Moves to Larger Quarters

The Pinellas Electric Refrigeration Co., distributors in Pinellas County, Florida, for General Electric refrigerators, have moved from their former offices at 18-30 Florida Arcade to 528 Central Ave., St. Petersburg, Fla. The need for increased space made the change necessary. The company also operates a store in Clearwater, Fla.

Frigidaire Has New Outlet in Savannah, Ga.

C. H. Sheldon and Edwin Sendig, both of Brunswick, Ga., and Blanchard Battle, of Savannah, Ga., have taken over the retail distribution for Frigidaire electric refrigeration in Savannah. The name of the new concern is the Savannah Sales Co., Frigidaire. The store, located at 113 Whittaker St., will be under the management of Mr. Battle.

Duluth General Electric Distributor Has New Show Room

A. S. Dunning, Inc., General Electric refrigerator dealer for Duluth, Minn., and surrounding territory has opened an exclusive electric refrigerator show room. This company has approximately 75 sub-dealers throughout this territory operating directly under its supervision.

H. J. Krackowiser in New Location at Kingston, Pa.

H. J. Krackowiser, refrigerating engineer, insulating contractor, and agent for Brunswick refrigerating machines, announces his removal from 22 South Main St. to 600-604 Market St., Kingston, Pa. The new location will provide larger and more convenient quarters.

Refrigeration Service Co., Inc. SERVICE SPECIALISTS

Maintenance, Installations, Alterations, Repairs
New York City
Telephone: Chickering 0460
Office and Works 449 West 42nd St. Warehouse 281 11th Ave.

REFRIGERATION PATENTS SPECIALIST IN HOUSEHOLD MACHINES AND WATER COOLERS, INVESTIGATIONS, REPORTS, SEARCHES. SPECIAL ATTENTION PAID TO ASSOCIATE WORK.

H. R. VAN DEVENTER
SOLICITOR OF PATENTS
342 Madison Ave.
NEW YORK CITY

THE CONDENSER

A CLASSIFIED COLUMN OF OPPORTUNITY

REPLIES to box number advertisements should be addressed to Electric Refrigeration News, 554 Maccabees' Bldg., Detroit, Mich.

ADVERTISING RATES—this column only:

POSITIONS WANTED (special rate if paid in advance): 50 words or less, one insertion, \$2.00, additional words 4 cents each. Three insertions, \$5.00.

POSITIONS AVAILABLE, For Sale, Business Opportunities, and all other classifications (special rate, if paid in advance): 50 words or less, one insertion, \$3.00, three insertions \$8.00, additional words, 5 cents each.

LINE RATE (open account): 50 cents per line.

POSITIONS WANTED

ENGINEERING EXECUTIVE,

connected with electric refrigeration for ten years, desires connection with responsible manufacturer in temporary or permanent capacity as consulting or chief engineer. Capable of taking complete charge of engineering and manufacturing. Inventor and owner of widely used patents. Well acquainted with patent situation. Box 52.

EXPERIENCED EXECUTIVE, former factory superintendent, now general service manager for large distributor of a leading electric refrigerator, desires change. Man with strong background of business experience, with employers' interests at heart, references of highest class. Prefers to affiliate with similar industry having generous territory centered in large metropolis. Box No. 76.

REFRIGERATING ENGINEER. At present employed. Seeking new connections. Seven years experience designing, producing and manufacturing. Other details upon interview. Box 77.

EXECUTIVE,

with over 6 years' experience in electric refrigeration development, production, sales and service. Graduate electrical and mechanical engineer. Box 79.

Permanent position wanted by refrigeration service and installation man. At present pleasantly employed but would like a change offering better opportunities. Seven years' experience of Frigidaire. Can handle all phases of Frigidaire work. Also some experience on other makes. Wages not as important as pleasant working conditions. Prefer some distributor or dealer with large territory and would like to take service department on own responsibility. Box 78.

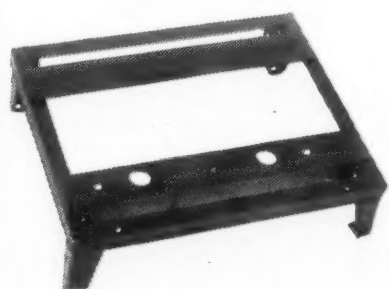
Refrigeration engineer, college graduate, seven years experience with the two leading manufacturers of household and small commercial machines, having served successively as serviceman, salesman, dealer, service manager, and commercial equipment designer would be pleased to receive offers from responsible companies to whom his services would be available. Although technically educated this man is extremely practical, basing his designs and recommendations on the needs of and service to the ultimate purchaser and user. Present at the A. S. R. E. convention, Detroit. Communicate with A. S. R. E. c-o Refrigeration News.

Household cabinet engineer with five years experience with large manufacturer in designing and building cabinets for electric refrigeration, desires connection with new or growing concern to take complete charge of designing and construction of household or apartment house cabinets. Can develop an attractive line of decorated cabinets. Excellent references. Box No. 81.

SALE OR RENT FACTORY—WAREHOUSE

Manufacturing plant suitable for wood or steel refrigerators. Also suitable for warehouse. Four floors, 40,000 square feet total, elevator, dust conveyor, large lumber storage, fire sprinkler system, 75 horse-power water wheel, dry kiln, new heating system, 50 miles from New York and Philadelphia—65 from Scranton on concrete highways. Two railroads, low taxes and non-union labor. Write Wm. F. Morris, 30 West Blackwell St., Dover, N. J.

Refrigeration Stampings



Angle iron supporting bases for freezer units. Electrically arc welded—built to your specifications. Metal guards to cover units.

Motors Metal Mfg. Co.
DETROIT, MICH.

ELECTRIC REFRIGERATION NEWS

The business newspaper of the electric refrigeration industry

VOL. 2, No. 21, SERIAL NO. 45

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DETROIT, MICHIGAN, JUNE 20, 1928

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PRICE TEN CENTS

GREENWOOD OUTLINES MARKETING PROBLEMS OF POWER COMPANIES

**Average Home Spends Only
\$29.50 Per Year for All
Types of Electric Service**

PRESENTING the marketing problem of the power companies, C. E. Greenwood, commercial director of the N. E. L. A., in addressing the Atlantic City Convention, compared the increase in the consumption of electric current with the increases during corresponding periods, in the sale of certain other commodities. According to Mr. Greenwood, the central station is in many cases not aware of the type of commercial selling that must be used. Power companies in the past have believed that increased current consumption would naturally come to them with the normal growth of the country and that aggressive effort was not necessary. Today this has changed.

In the period from 1922 to 1926 the power companies experienced a loss of ten per cent per kilowatt-hour per dollar invested, due to increased capital requirements under new economic conditions. In contrast with this loss, retail trade, in the period of 1921 to 1927 increased 35% and motor cars 127% so that 18% of car owners now own two cars. During this same period electrical consumption per capita grew only from 3.16 to 3.27 kilowatt-hours.

With advertising of \$8,000,000 to \$10,000,000 in 1927 the power companies marketed about 1,000,000,000 kilowatt-hours in the wired homes of the country, being on an average gradient that slopes from 404 to 429 kilowatt-hours per year per home.

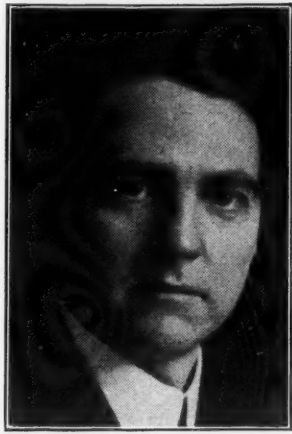
The commercial policy is one of selling electricity as a needed thing and not as a mere luxury. The American people have become "comfort-conscious" yet the average home paid \$28.26 in 1926 against \$29.20 in 1927 because of the traditional luxury idea that has been allowed to accompany the use of electric current. The commercial departments of the central stations must put before the public accurate data as to the cost of electric appliances and the services which they render. Commercial departments can only perform this service if sufficient man power is available. In line with the statements made by Mr. Davidson, Mr. Greenwood also indicated that it is the power companies' duty to lead the way in local salesmanship, helping local merchants and contractors so that all will work together in achieving sales of appliances which will mean increased current consumption.

GEORGIA POWER CO. CAMPAIGN IS RUNNING AHEAD OF QUOTAS SET

"Plane-Fax," a daily bulletin issued by the Georgia Power Co., Atlanta, covering its \$500,000 electric refrigeration campaign running from May 1 to June 30, announces that on June 12, 89.2 per cent of the half-million quota had been made. This campaign, described in detail in the May 23 issue of ELECTRIC REFRIGERATION NEWS, was staged in the form of a "round the world airplane flight," each office of the company being provided with a map and tracing its course around the globe in relation to the daily movement of the quota plane.

A close three-cornered race has developed among Atlanta, Athens and Macon. "Plane-Fax" announces that there will be "big doings" in Atlanta on July 7.

Aided in Success of A. S. R. E. Meeting



J. H. Bracken



Mrs. C. C. Spreen



Harold L. Pope



Ernest B. Miller

J. H. Bracken, of the Celotex Co., Chicago, Harold L. Pope, of Leonard Refrigerator Co., Grand Rapids, and Ernest B. Miller, of the Davison Chemical Co., Baltimore, addressed the 15th Western Meeting of the

American Society of Refrigerating Engineers held in Detroit, June 4-7. Mrs. Spreen, wife of C. C. Spreen, chief engineer of Kelvinator Corp., was chairman of the women's entertainment committee.

TECHNICAL MEN SEEK TOP LEVEL OF EFFICIENCY

**A. S. R. E. Devoting Attention to
Improvements in Cabinet Design
and Test Methods**

VISITS to the plants of Kelvinator Corp., and the Detroit City Service Co., brought to a close the four day session of the American Society of Refrigerating Engineers who met at the Statler Hotel, Detroit, Mich., June 4 to 7. This, the fifteenth meeting of the A. S. R. E., was attended by approximately 150 members of the organization. A report of the first day's meeting together with photographs of a number of the speakers appeared in the June 6 issue of ELECTRIC REFRIGERATION NEWS.

The second technical session of the convention opened Tuesday with an address by Dr. H. F. Taylor, vice-president of the Atlantic Coast Fisheries Co., New York. Dr. Taylor pointed out a number of problems which had to be solved before their product could be shipped to distant points and its arrival in good condition guaranteed. In modern practice only the edible parts of the fish are kept and these fillets are wrapped individually in craft paper and are kept in a frozen condition from the time they are packed until they are delivered to the housewife by the retail fish dealer or grocer.

There is still the problem of educating the housewife to the purchase of frozen fish and at the same time the problem of finding a type of refrigerator for the small store which will keep the fish in frozen condition.

(Continued on Page 6)

WASTE OF FOOD DUE TO LACK OF REFRIGERATION

With only 55 per cent of the 28,750,000 American homes having refrigerators, and with only 20 per cent of these using refrigeration all the year, "housewives in the United States waste \$700,000,000 in food annually through spoilage," according to an engineering official of the Middle West Utilities Company, who figures spoilage at ten cents per day for most families. Were it possible to check the needless waste, it would be found that values would be sufficient to feed one of the major nations of Western Europe.

ENGINEERS POSTPONE MEETING SCHEDULED IN DETROIT TODAY

Future of A. R. A. Indefinite

The second meeting of the Automatic Refrigeration Association, proposed new organization of chief engineers representing manufacturers of equipment under one-ton capacity, scheduled to be held at the Hotel Statler, at 10 A. M. Wednesday, June 20, has been cancelled by Chairman L. H. Kielholtz. No announcement has been made regarding the date of the proposed meeting and it is understood that the completion of the new association has been indefinitely postponed.

McGRAW ADVISES CENTRAL STATIONS TO CHANGE APPEAL

**Says Luxury Appeal is Vogue Now
Tendency to Reduce Rates
Too Rapidly**

"IN THE future the sale of electrical energy and electrical equipment in the American market is going to depend less upon whether or not the people should use the service. It will depend more upon whether or not they elect to spend those dollars for electricity or for something else which at the moment may have more appeal." These statements, made by James H. McGraw, president of the McGraw-Hill Publishing Co., Inc. New York, before the fifty-first convention of the National Electric Light Association held at Atlantic City, summed up the problems before the merchandise executives of central stations in this country.

"The prevailing question today has become whether to apply available money to something electrical, to an automobile, a radio, a phonograph, a camera, furniture, clothing, shrubbery or a more extended vacation," said Mr. McGraw. "This mental attitude, as you know, has not been the outcome of accident. It is the result of ingenious and highly organized sales activity. At the present time in the neighborhood of 108 industries are engaged in concerted programs of co-operative promotion for the purpose of strengthening their positions in the market place, by securing the attention and developing the interests of the public.

Turning to the advertising efforts of the

(Concluded on Page 4, Column 2)

RICHARDSON URGES UTILITIES TO PUSH REFRIGERATION NOW

**"Selling the Idea" Plan Boosts
Sales of Texas Pr. & Lt. Co.
to 75 Units Per Week**

OF the addresses delivered at the fifty-first convention of the National Electric Light Association, held at Atlantic City, June 4-8, perhaps the one of most interest to those connected with the electric refrigeration industry was that of G. B. Richardson, of the Texas Power & Light Co., Dallas, chairman of the N. E. L. A. Refrigeration Committee. Mr. Richardson drove home the belief of the committee that 1928 is, above all, a year in which electric refrigeration must be sold through aggressive methods.

The committee, after a thorough study of the industry, is thoroughly convinced that the manufacturers as a whole, are offering a product which is thoroughly reliable and that having arrived at this point it is now the work of the central stations of the country to put forth a concerted effort in promoting the sale of this popular appliance. Inasmuch as the power companies have a permanent interest in the current consumption created by the installation of each electric refrigerator, the committee recommends intensive selling effort on electric refrigerators, not only during the summer months, but through the entire year.

In keeping with this recommendation the committee has prepared a campaign for power companies, presented in portfolio form and designed to make year-round electric refrigerator sales an actuality, for each central station. This plan, known as the "Selling-The-Idea" campaign covers a personalized direct mail campaign, a series of newspaper advertisements to be used locally, and window displays, these to be available to all companies at a minimum charge and so designed that their use may be started at any time without reference to the season and to be combinable with present local offers of any company.

Mr. Richardson stated that this campaign, first used by the Texas Power & Light Co., to a list of 15,000 names, has proved its value and that the company is now placing 75 electric refrigerators each week as a result. This plan is available for all members of the association and to be used by them either in whole or in part as a means of increasing year-round electric refrigerator sales and at the same time increasing current consumption on their lines.

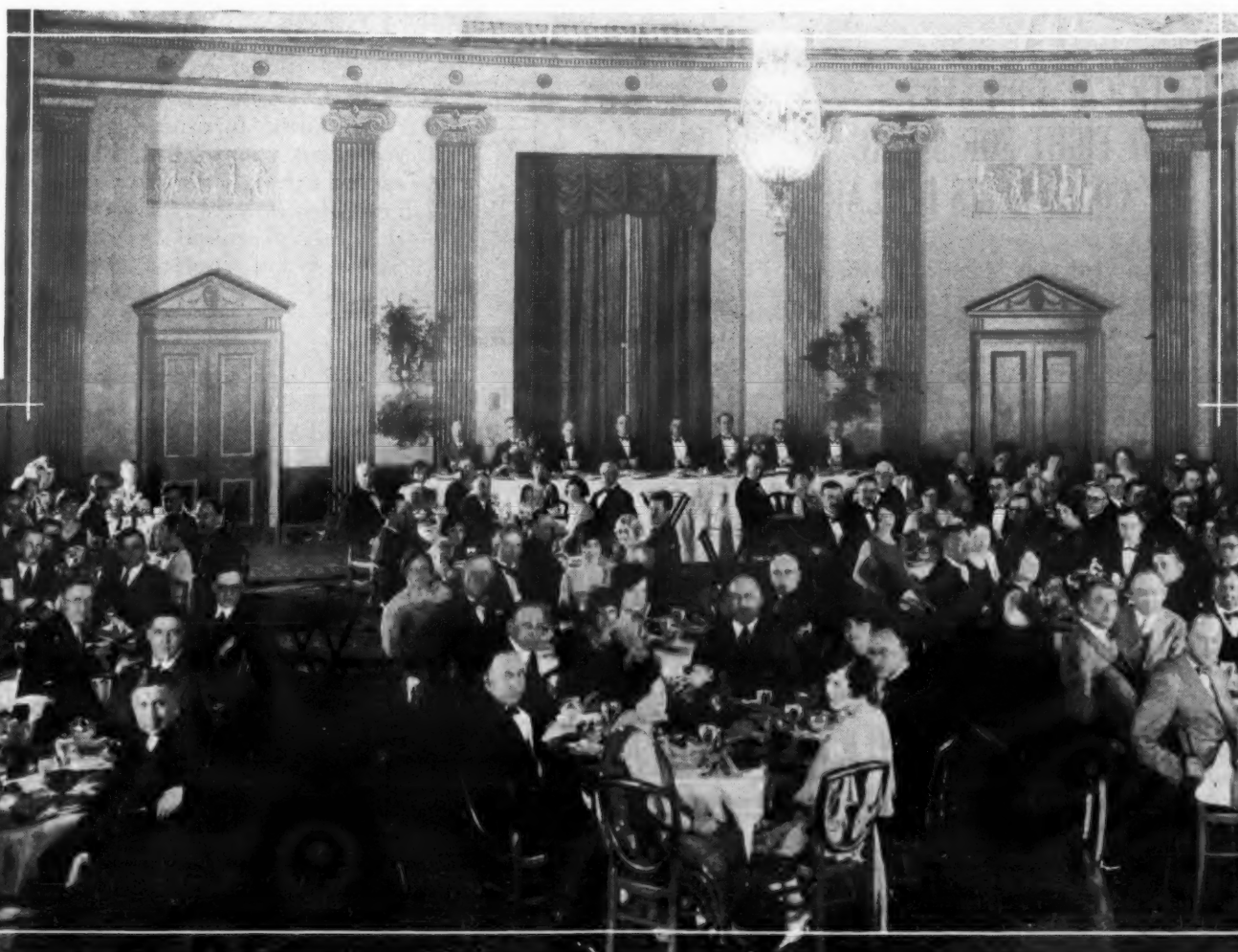
D. A. BROWN AWARDED HONORARY DEGREE BY HEBREW UNION COLLEGE

David A. Brown, president of General Necessities Corp., Detroit, manufacturers of Absopure Refrigerator, was honored by the Hebrew Union College of Cincinnati, O., recently when the honorary degree of Doctor of Hebrew Law was conferred upon him by Dr. Julian Morgenstern, president of the institution, in recognition "of distinguished service to American Jewry."

Mr. Brown is chairman of the finance committee of the Union of American Hebrew Congregations and also chairman of the United Jewish campaign which has raised approximately \$20,000,000.

In recognition of this work he was made an honorary member of the Alumni Association of the Hebrew Union College, being the first layman to receive this distinction.

Poet and Aviator Speak at Society's Banquet



On the Boardwalk at the N. E. L. A. Convention in Atlantic City, June 4-8.



Top row, left to right

First group—W. R. Winans, Miss M. E. Brennan, Mrs. and E. D. Doty (Frigidaire). Second group—W. D. McElhinny, C. W. Hadden and A. M. Taylor (Copeland). Center—Gerard Swope, president, General Electric Company. Third group—Wm. Reynolds, H. L. Bickel, C. A. Miller and B. O. Brown (Servel). Fourth group—H. H. Webber (Seeger), J. R. Sayre (Kelvinator), J. J. Leonard (Seeger), R. E. Densmore (Kelvinator), and H. F. McGrath (Seeger).

Bottom row, left to right

First group—Mr. and Mrs. H. F. Alexander (Lamson). Second group—Jeffrey O'Donnell (on the right) (Westinghouse). Third group in the chair—Roi Woolley and Weston Vogel (Savage Arms). Fourth group—Harry Seick and Campbell Wood (Kelvinator). Fifth group—A. H. Patterson and Dan Stewart (Sparklets).

CENTRAL STATIONS HAVE RIGHT TO USE ACCEPTED MERCHANDISING METHODS

Utilities Have Often Incurred Losses in Pushing New Devices

"I believe, on the whole, the central station industry is maintaining prices of merchandise on a fair basis. I do not believe there is any excuse at this time for central station companies selling established lines of electrical merchandise at a loss, except in specific cases where the device in question has not had sufficient acceptance to make it a common article of trade, or where, if the central station company does not make some effort to place it in that position it will never get there. There are plenty of such articles being developed every year." These statements were made by E. W. Lloyd, vice-president of the Commonwealth Edison Company before the National Electric Light Association convention at Atlantic City.

"I think we should discourage the giving of premiums of various kinds," said Mr. Lloyd, "but I see no reason why we should not follow the accepted practice in the merchandising trade for the disposal of merchandise that does not move quickly. All merchandising concerns recognize this principle. They also look for leaders to attract people to their stores. When merchandise does not move quickly, they see to it that it will by cutting the price. It is standard accepted practice to carry on seasonal sales on a very wide line of goods at prices they advertise as being below the standard price."

"Who is not familiar with the January linen, the August fur, and the March furniture sales? Now this suggestion that we cut prices does not mean that we should cut the price of merchandise of standard acceptance, but that we have a right to follow accepted practice in merchandise trade, such merchandise to be legitimately disposed of."

Referring to complaints of retail store organizations as to the practices of the central station, Mr. Lloyd said: "We note that department stores advertise a standard line of goods at cut prices where they are able to buy a job lot from a firm going out of business, to buy from a jobber or manufacturer caught with too much stock, or to purchase a bankrupt stock. Why should we not do the same if the goods are right?"

Mr. Lloyd also pointed out the fact that many of the appliances, the sale of which brings large profits to the department stores today, are only popular because of the intense selling efforts of the central stations on these particular appliances.

Referring to devices still in the promotion stage, he said: "As a recent example, let us recall the domestic refrigerating machine and in the recent past, the washing machine, on which we and the manufacturers have had to incur large losses in order to put such devices on a strictly merchandising basis. Some of them have not arrived yet."

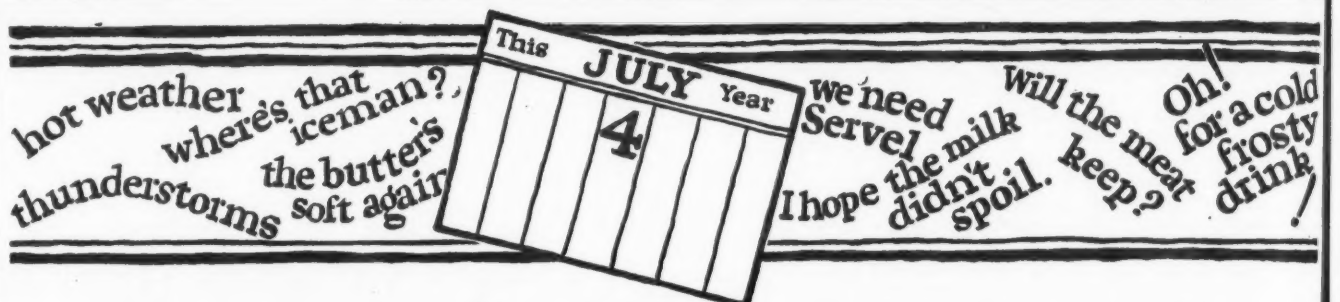
"If the central station companies had not placed themselves behind these and similar devices with money and service at their command, the department and hardware stores would not be able to sell them today. Who ever heard of a case where those now complaining furnished money to perfect any electrical device?"

ELECTRICAL INDUSTRY MUST FIGHT FOR SHARE OF CONSUMER'S DOLLAR

Davidson Proposes Slogan—"More Kilowatt-Hours Per Capita"

The meeting of the commercial section was opened by J. E. Davidson, of the Nebraska Power Co., Omaha, chairman. According to Mr. Davidson the time has arrived when the electrical industry must shift its attention from the subject of internal organization to that of meeting the competition offered by other industries in bidding for a share of the consumer's dollar. Mr. Davidson stressed the necessity of a united effort of all companies if the electrical industry is to meet competition. It is no longer a matter of competition between individual power companies but rather between industrial units. Definite progress, according to Mr. Davidson, has in the past two years been made toward the objective but the time is now ripe for concerted action in bringing before the public the constantly increasing value of electric service.

"More kilowatt-hours per capita" is the campaign cry proposed by Mr. Davidson. While the work before the central stations is clear, it is up to them also to enlist the aid of the retailers, architects and builders who are in a position to advocate the purchase and use of good electrical appliances.



meet 4 Servel prospects

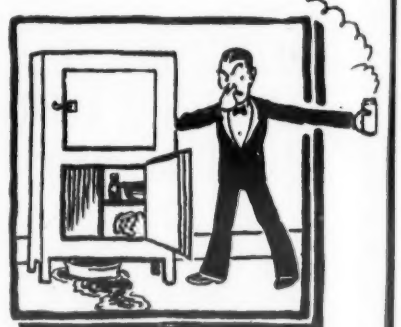


HE OWNS a store and sells perishables. Meats and dairy products. When he reaches into his refrigerator for a pound of print butter, he wants to find it cold and solid and fresh. He needs Servel electric refrigeration. He lives in your town. Sell him . . . now!

MEET the proprietor of one of the more elite of our restaurants. He is in a sad and retrospective mood. It's on account of the mayonnaise. It has passed away. And to think that the low, even temperature of Servel electric refrigeration would have saved it! See him and sell him . . . today.



YOU know this man. He has a big office. Walnut furniture, glass mail trays, big reception room. But his drinking water is served through very ancient contrivances that give him stale, warm water in the middle of this July afternoon. Need we say it? Sell him Servel Water Coolers!



DEALER, here's your man! He has just asked for a spoon to serve the butter. Does he need a Servel Electric Refrigerator in new, multitone colors? He'll never need it more than he does today! Show him, and sell him.

For information, literature or advertising help on any item of the complete Servel line of electric refrigeration, address our Advertising Department.

Servel Sales, Inc.

Factory and General Offices: Evansville, Indiana
Administrative Offices: 51 East 42nd St., New York

Oakland

Chicago

Los Angeles



One way to make certain of July profits is to display Servel



An Amazing / Public Tribute !

*- two thousand carloads of
General Electric Refrigerators
delivered to users since April first*

The General Electric Refrigerator has now been on the market for one year. From the day it was first announced, it was accepted by the public with truly amazing enthusiasm. Since April first, more than 2,000 carloads have been delivered to American homes. This is a gratifying tribute to the General Electric Refrigerator—a true achievement in electrical engineering.

Nine factories now working at top speed

The tremendous demand for these "years ahead" refrigerators has made it necessary to increase production again and again—just as rapidly as is consistent with General Electric standards of quality. Now nine factories are

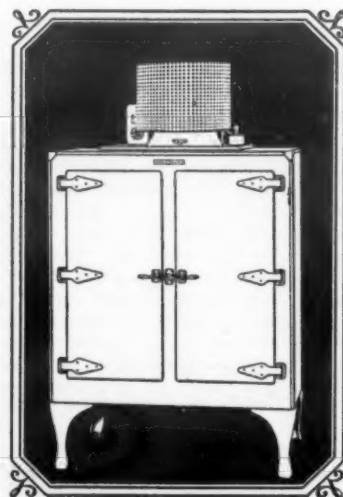
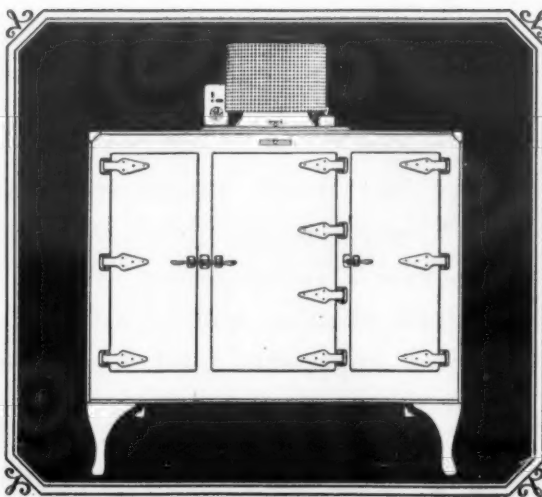
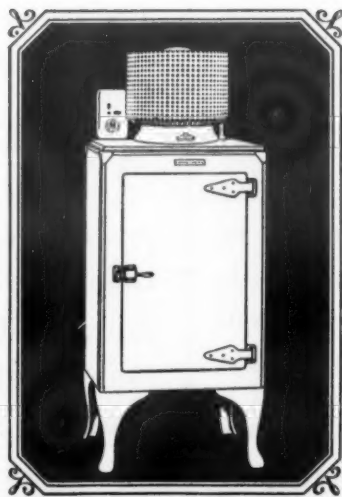
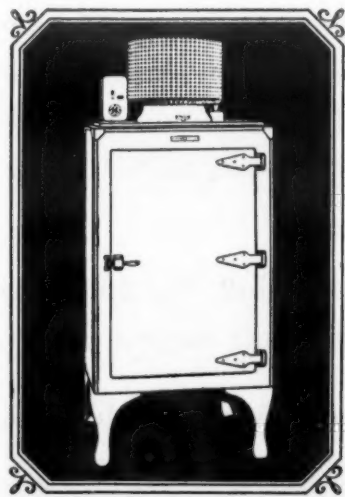
working at top speed to take care of the increasing volume of business. Just as soon as each refrigerator has passed its many rigid tests, it is shipped to a waiting customer. All orders now on file will be filled within the next few weeks.

High quality gains quick recognition

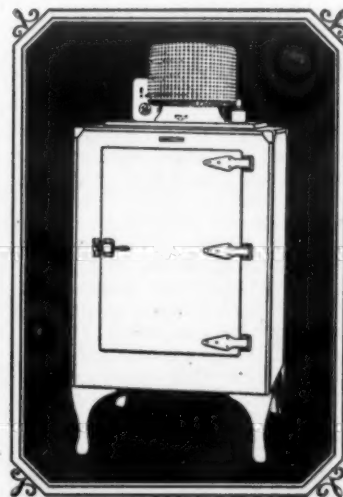
The first 100,000 discriminating American women to choose this revolutionary refrigerator have been its best advertisers. They have pronounced it unusually quiet, economical in operation, easy to keep clean and worry-proof. It is their verdict which, in a large measure, is responsible for this hearty nation-wide acceptance.

GENERAL ELECTRIC Refrigerator

The General Electric Refrigerator is entirely different from all others. All its mechanism is safely stowed away, on top, in an airtight steel casing.



These refrigerators are unusually quiet. They are so completely automatic that they don't even need oiling. They are made and guaranteed by General Electric.



General Electric Co.
Electric Refrigeration Department
Hanna Building Cleveland, O.

ELECTRICAL SERVICE TO RURAL SECTIONS EXTENDING RAPIDLY

That rural communities will offer an increasingly fertile field for the sale of electric refrigeration is evidenced in the report of Charles F. Stuart, of the Northern States Power Co., Minneapolis, chairman of the Rural Electric Service Committee of the National Electric Light Association. In this report, read by Mr. Stuart at the third general session of the N. E. L. A. convention at Atlantic City, the following interesting statements were given:

It is probable that no year in history has witnessed such significant developments in the application of electricity to agriculture as the year just closed. Farmers, farm organizations, agricultural colleges, the electrical industry, manufacturers of electrical equipment, manufacturers of farm machinery, government departments, all have been stepping harmoniously forward, overcoming obstacles, developing new facts, interchanging and spreading information, enlisting new recruits, building farm lines and putting electric power to work at more and more tasks on an ever-increasing number of farms.

During the year more and more electric light and power companies have organized themselves to undertake intelligently the extension of their service into agricultural territory. The year marked an increase of 60 per cent in the number of companies having either rural electric service departments or men especially trained in this particular field, and there is prospect of an even more material development in this line in the year to come.

No attempt was made to count the number of additional farms connected in 1927, as this work has now been included in the periodical electrical census taken by the Bureau of the Census, Department of Commerce. It is significant, however, that in four states, where electric utility organizations made such a count it is found that electric light and power company service was extended to 21,217 additional farms.

ELECTRIC RANGE HARDER TO SELL THAN RADIO OR REFRIGERATION

An appliance, the sale of which presents many of the problems accompanying the sale of electric refrigerators, is the electric range. In the absence of A. B. Collins, of the Alabama Power Company, chairman of the N. E. L. A. Domestic Electric Range Committee, his report at the Atlantic City convention was read by C. J. Eaton. This report stated that, unlike the electric refrigerator and radio, the electric range did not enter the market as a "sold" commodity but that a campaign of education had to be undertaken to make it acceptable to the housewife.

The committee had before it the task of selling the idea of electric cooking to the women of America. Toward this end, a liaison was formed between the National Electric Light Association, the National Electrical Manufacturers' Association, and the Society for Electrical Development. The results of this program emerged in the form of a plan book completely adapted to the end of developing electrical cooking as a national possibility.

This book was offered to the public service companies. The plan uses educational newspaper advertisements and mailing pieces, a variety of which are designed to be mailed to the home with the monthly service bill and is long time in character, with the idea that it will be reinforced by individual central station activities in the commercial department.

NATIONAL ELECTRIC POWER SALES OF APPLIANCES EXCEED 1½ MILLION DOLLARS IN 1927

Of the \$18,088,731 gross earnings in 1927 of National Electric Power Co., which serves through its subsidiaries 512 communities in Maine, central Pennsylvania, Ohio, Indiana, Michigan, South Dakota, Nebraska, Kansas, Oklahoma and Arkansas, with 176,690 electric and 23,075 gas customers, 8.35 per cent represented sales of gas and electric labor-saving devices, being \$1,509,861, including electric refrigerators. The gross earnings increased \$837,049 over 1926 earnings, and equipment unit sales increased by 10.9 per cent.

The Charm home sponsored by the Cincinnati Commercial Tribune and Maddux Building Co., 1004 Atlas Bank Bldg., will be equipped with a General Electric refrigerator. Milnor Refrigerating Co., local distributor, announce the sale.

Dinner Marks Appointment of Morison Electrical Supply Co. as New York Welsbach Distributor



McGraw RECOMMENDS LARGER EXPENDITURE TO DEVELOP BUSINESS

(Concluded from Page 1, Column 4)

electrical industry, Mr. McGraw said, "In the presentation of its product, however, I think that the electrical industry stands at a disadvantage today. And I have not forgotten that the power companies spent \$10,000,000 for advertising in 1926, according to the last available report of your committee on advertising. But let us examine into this expenditure.

Central Stations Spend Only .006 of Income for Advertising

"That year the power industry enjoyed a total revenue of \$1,652,000,000. It therefore appropriated about six-tenths of 1 per cent of its gross income for the purpose of telling its story to the public. However, \$3,700,000 of that expenditure was for good-will advertising, \$1,000,000 was for supporting the sale of securities, \$4,300,000 went to advertise appliances and the remaining \$1,000,000 was devoted to promoting electric service of all kinds. Does it occur to you that only the last two items are of any particular influence in the market place?

"But other industries that sell the popular market have learned that an adequate presentation costs more than this. Three cigarette manufacturers, for example, together spent \$54,000,000 in advertising last year. And to compare percentages, one leading manufacturer of motor cars spent 3 per cent, a leading soap firm 2 per cent, a large paint manufacturer 3½ per cent. And so it goes. The contrast is striking."

Every Business Has the Inherent Right to Sell

Following this comparison, Mr. McGraw suggested to the assembled central station men that—"It would be well to analyze the comparative expenditures of this and other industries for market development and to establish with the utility commissions the economic soundness of spending money courageously to increase the volume of sales per customer in order to make reduced rates possible. No one questions the right of a Wrigley or Ford to advertise this purpose. Why is it less sensible to promote aggressively this other merchandise? Every business has an inherent right to sell."

Again referring to the public attitude toward electric service, Mr. McGraw said that the central stations are making a mistake in talking too much about the utility of electric service rather than its luxury. He cited the automobile, travel, moving pictures, radio and other lines as outstanding examples of spectacular success in the popular market.

Considering the subject of reduced rates for electric service, Mr. McGraw expressed his belief that "the present tendency among power companies is to reduce rates too rapidly, forgetting that the whole psychology of America today inclines toward luxuries and is indifferent to the economy appeal. The industry needs rates that will help extend the more complete use of electric service by every consumer, but the power company must have price courage and not give way in premature rate reductions, the millions which should be spent in the development of the market. For it is more in the public interest that the comforts and economies of electricity be brought into universal use and made less expensive by the consequent increased production than by it being cheapened by price cutting before adequate money has been spent to build the market."

Change of Name

Campbell-Shirk Company, 3200-3210 Auer Ave., Milwaukee, Wis., announce the change of their firm name to Campbell Refrigerator Co. The factory and main office addresses remain the same.

The Welsbach Co., Gloucester, N. J., was recently host to the executive personnel and fifty-two retail salesmen of the Morison Electrical Supply Co., Inc., at a dinner and smoker in New York City.

The occasion marked the announcement to the field representatives of the Morison organization that it would immediately commence the distribution of Welsbach household and commercial refrigeration in the territory served by its seven stores. Quotas for a five week period were established and competitive prizes were announced.

In addition to short talks by C. T. Morison, president of the organization, and Richard Vogel, sales manager, the group was addressed by representatives of the Welsbach Co., among whose representatives present were E. S. Chaplin, manager New York Branch, L. A. Coons, New York district sales manager, as well as Wm. R. M. Very, sales promotion manager—refrigeration division, and Austin Monty, Philadelphia district sales manager. John M. Wicht, representing the wholesale activities of the Morison organization, acted as toastmaster.

NEW YORK SECTION OF A.S.R.E. HEARS TALK ON CARBON DIOXIDE ICE

Carbon Dioxide Ice was the subject discussed at the May meeting of the New York section of the American Society of Refrigerating Engineers, held May 23 at the Machinery Club, 50 Church Street, New York.

The speaker of the evening was John E. Starr, introduced by Stephen Bennis, president, as the "Dean of Refrigerating Engineers." Mr. Starr presented the uses of carbon dioxide ice and also the limitations of this product as they appear to him. According to Mr. Starr, carbon dioxide ice has been known for almost one hundred years, but it is only recently that emphasis has been given to the manufacture of this product. New possibilities for its use are continually appearing.

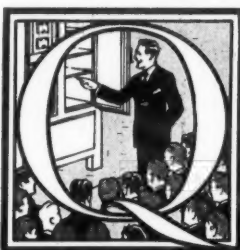
James W. Martin, Jr., of the Dry-Ice Corporation, New York, outlined the policy of his organization and told of what they propose to do in this field.

Following Mr. Martin, J. R. Lassiter, Jr., of the Solid Carbonic Company, Ltd., New York, presented interesting information regarding the use of this product, with particular reference to the large demands for solid carbonic ice for use in ice cream trucks. Mr. Lassiter stated that the demand for this product is constantly increasing and that a considerable number of manufacturers of ice cream have given up entirely the use of salt and ice in favor of the carbon dioxide product.

Frigidaire Corp. announces that the Anderson-Soward Piano Co., 14 North Main St., Dayton, O., has taken on the distribution of refrigerators in addition to its line of pianos, radios and musical instruments.

A C A T E C H I S M

for
men who wish to know
their "electric" refrigeration



Question.....

Now scholars, tell me,
what is Refrigeration?

Answer:

The dictionary says, it's "Reduction of heat—"

Q But doesn't it say "Reduction of heat by Electricity"?

A No. Because electricity doesn't reduce it!

Q But I thought "electric" refrigeration was an electrical problem.

A Not at all. Electricity is only one of many forces which can be made to operate a refrigerating system. And with minor changes and adjustments, the electrical apparatus used has been standard for years.

Q Then what causes this Reduction of Heat?

A The alternate expansion and contraction of a chemical from gaseous to liquid form.

Q Then to build an efficient refrigerating system one should be an authority on heat? And on the action of gases?

A Now you're getting warmer.

Q What name is best known in America for its accomplishments in these fields?

A Welsbach.

Q How has Welsbach used its leadership in these fields?

A By perfecting Low-Pressure Refrigeration. Welsbach mastered problems previously thought impossible; created a simplified mechanism; evolved a new lubricant; flooded internal moving parts with a liquid seal and safeguarded them against wear.

Q Then you think Welsbach has a basis for its amazing success this year?

A Absolutely. And my advice is, Watch Welsbach!

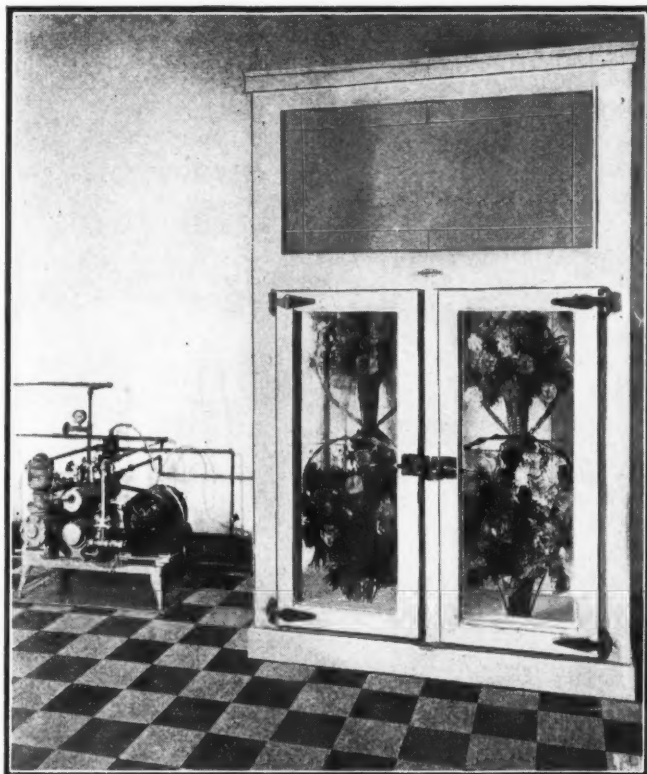
Welsbach Company, Gloucester City, N. J.

In Between the 2 Big Markets Household and Industrial Dole Co

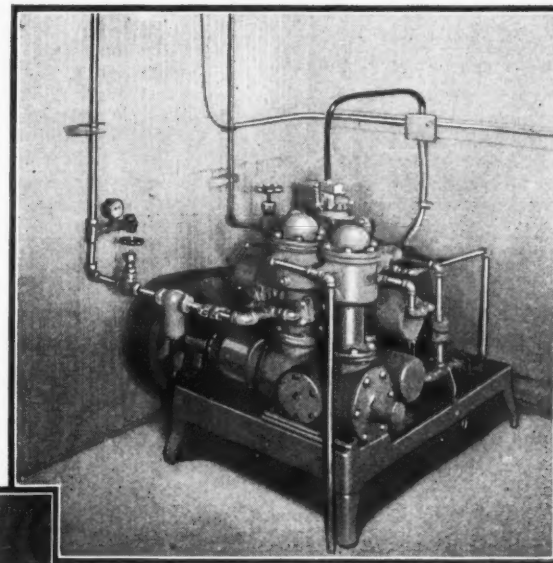
REFRIGERATION

meets the need for
intermediate commercial sizes
of automatic refrigerating units.

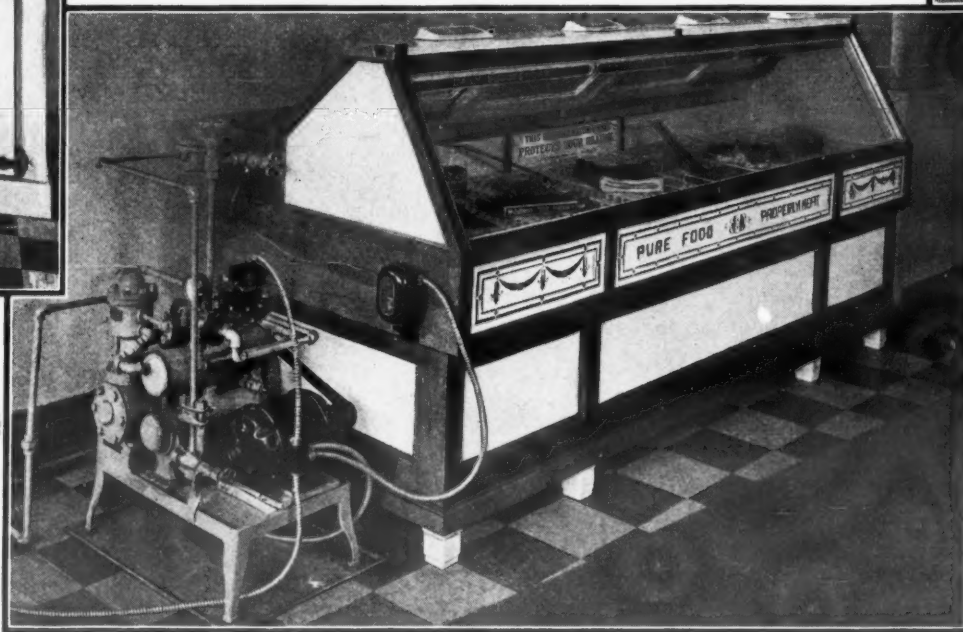
fills in the gap
between the small household
and the heavy industrial units.



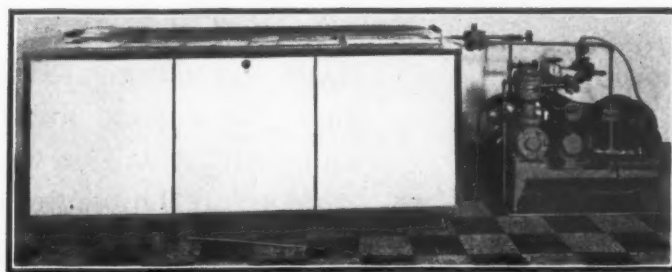
Central stations have profited greatly from the intensive development of industrial refrigeration—ice making and cold storage plants. Thousands of small household machines are doing their part to swell the revenue of the power companies. Between these two big markets another important field awaits development.



Commercial applications of electric refrigeration in the great variety of retail establishments dealing in perishable commodities offer most attractive opportunities for increasing central station load. DoleCo automatic electric units in six sizes, are designed to meet the requirements of the average commercial installation, particularly storage and display cases in retail food stores, such as grocers, butchers and delicatessens, for ice cream cabinets and soda fountains, for florists and restaurants—the numerous establishments in every community where the well-known makes of small machines are inadequate and industrial types are too large.



The DoleCo line offers attractive possibilities to the present established dealers in the smaller sized units, as well as the engineering concerns specializing in industrial refrigeration. DoleCo machines are simple in design, easily installed and highly efficient in operation, they are electrically operated, automatically controlled, water cooled units of the ammonia compression type. Made in six sizes from $\frac{1}{4}$ to 2 horsepower, or 250 to 3,000 pounds of ice melting capacity.



Public utility executives, refrigerating engineers, electric refrigeration distributors and dealers are invited to write for complete data and descriptive literature. Desirable territories are available to responsible

dealers. Specialized direct advertising material and testimonials from satisfied users are provided to assist you in developing business. DoleCo engineers are ready to aid you in problems of application.

Dole Refrigerating Machine Co.
1209 W. WASHINGTON BOULEVARD
CHICAGO, ILLINOIS

TOLEDO EDISON CO. SELLS 926 UNITS IN 48-DAY CAMPAIGN

Employees Locate 1328
Prospects—Sales
Total \$286,231

In the spring sale of electrical refrigerators, the Refrigeration Department of the Toledo Edison Co., sold 926 units. Special inducements were made and a bonus was offered to all Edison employees for each prospect turned in that resulted in a sale during the campaign. In the 48 selling days, employees turned in a total of 1328 prospects of which the Refrigeration Department was successful in selling 205 or 15.4 per cent.

Following is the report of the refrigerator equipment sold during the campaign:

Units	Sales Price
Domestic	408 \$105,037.90
Apartment House	182 20,233.00
Commercial	336 160,960.50

Total 926 \$286,231.40
P. E. Sowash led in the household and apartment division with total sales of \$13,327.00. M. G. Wrigley was second with total sales of \$11,038.50 and F. H. Cook third with \$9,195.10. The two leading salesmen in the commercial division were: J. N. Bolton with total sales of \$29,784.00 and H. C. Bennington with \$28,429.50.

TECHNICAL DISCUSSION AND ENTERTAINMENT AT A. S. R. E. MEETING

(Continued from Page 1, Column 2)

Vice-president, L. H. Jenks, district manager of the Frick Co., Waynesboro, Pa., was chairman of the session and took part in the discussion of the talk by Dr. Taylor together with several other members.

The second paper on the program was entitled "Applications of Refrigeration to the Oil Industry." This descriptive paper by N. H. Hiller Jr., of the Vilter Company, Milwaukee, Wis., covered in a thorough-going way the important role which the larger types of refrigerating machinery play in the refining of oil. F. L. Fairbanks of the Quincy Market and Cold Storage Co., Boston, Mass., read this paper for Mr. Hiller and led the discussion.

Ice Engineering Talk Highly Interesting

Comments of those attending the meeting indicated that perhaps the most interesting paper of the entire program was one which had no direct bearing on the problems of the refrigerating engineer in his present capacity. Dr. H. T. Barnes, physicist of McGill University, Montreal, Canada, addressed the society on the subject of "Ice Engineering." This science which has been largely developed by Dr. Barnes centers about the problem of breaking up ice jams without danger to bridges or other structures, without injury to fish, and protecting water power plants from the dangers attendant to such jams.

A substance known as thermit is placed in metal containers beneath the surface of the ice and when ignited by a fuse generates in a few seconds, such intense heat that the ice is melted for a considerable distance around and in most cases a terrific explosion results, thus breaking up the ice jams at that particular point. The talk was extremely interesting and with numerous slides and motion picture films held the attention of the large audience for over an hour.

Following luncheon the society met again at 2 o'clock with an attendance which was a record one for a technical session of this group, there being 150 present. A paper on silica gel by E. B. Miller, president of the Davison Chemical Co., Baltimore, Md., occupied the attention of the group. A laboratory demonstration of silica gel was made showing a very rapid temperature drop to 12 degrees below zero in a minute and a-half. This talk was comprehensive, dealing with the cycle, the elementary mechanical processes and a wide number of applications of the silica gel unit.

W. F. Timmerman, engineer with the General Electric Co., Cleveland, O., next spoke on the "Design and Operating Characteristics of an Electric Refrigerator." A description of the General Electric machine was given in some detail with the aid of slides indicating graphically the various points brought out. This talk was followed by a brief discussion.

Dr. Stanley Talks on Food Preservation

The extreme importance of the proper preservation of food products was brought out in the address of Dr. Louise Stanley, chief, Bureau of Home Economics, Department of Agriculture, Washington. In speaking of the service problem on electric refrigerators, Dr. Stanley stated that in this connection she is attempting to do three things, namely, first, to educate the housewife to proper use of her electric refrigerator, second to show the sales or service man what the housewife should

Top Men of Toledo Edison Sales Crew



J. N. Bolton

F. H. Cook

H. C. Bennington

know about her electric refrigerator, and third, to educate both the housewife and the service man so that they will be able to understand and help each other when servicing is necessary.

Dr. Stanley, through her department, intends to educate the housewife to the need of refrigeration, help her in the selection of the proper type of refrigerator and then to show her how it should be used and how food should be placed in it to derive the most benefit from it.

The women guests of the Society met at a luncheon in the Wardell apartments which was followed by a visit to the Detroit Art Institute. Mrs. Glenn Muffy and Mrs. C. C. Spreen were hostesses. Further entertainment was provided in the evening at a bridge party in the Hotel Statler at which Mrs. Spreen and Mrs. D. E. Ellis were hostesses.

The third day of the Society meeting was occupied by a technical session in the morning, an inspection tour in the afternoon and the annual banquet and dinner dance in the evening. The opening paper of the morning session was by Professors Stuart and Holland of the Georgia School of Technology, Atlanta. In this paper, entitled "Double Pipe Cooler and Condenser Tests," results of tests run on ammonia coolers and condensers were presented showing the effect of heat transfer on plant operation. A Frick condenser and compressor were used in this test and results obtained were presented in elaborate graphic form.

George Hilger, of the X. L. Refrigerating Co., Chicago, presented the second paper of the morning, entitled "Modern Refrigeration Evaporating Systems." In this technical paper covering experiments with the larger types of refrigerating equipment, the author discussed the thermodynamic functions of evaporators, the sizes and types of evaporating systems, methods of operation and control and the commercial application of the various types of equipment. This paper was discussed at some length with the aid of slides.

"Heat Transmission in Refrigerator Cars," a paper by J. H. Bracken, manager of the Refrigeration Division of the Celotex Co., Chicago, brought the morning program to a close. Mr. Bracken accompanied his paper with slides showing the construction used in the standard refrigerator car and indicated that while the cars were providing fairly satisfactory service it would be advisable for the Society to make recommendations to the manufacturers for improvement in refrigerator car construction.

Wednesday afternoon, the convention party visited the Ford Motor plant at River Rouge. The rain which had persisted throughout the entire convention, somewhat detracted from the registration for the tour, but it was attended by about 100 out-of-town guests. Following the inspection of the River Rouge plant, the party continued to the Ford Airport at Dearborn, where they observed the manufacture of the large Ford tri-motored planes and inspected a number of crafts

(Concluded on Page 8, Column 1)

NATIONAL ELECTRICAL MANUFACTURERS ASSOC. MEETS AT HOT SPRINGS

More than 300 representatives of electrical manufacturers gathered at Hot Springs, Va., June 11-15, to attend the annual meeting of the National Electrical Manufacturers Association. The growth of the organization and its work in co-ordinating the activities of the various electrical manufacturing groups was reviewed by President Gerard Swope.

The N. E. M. A. recently invited the manufacturers of electric refrigerators to join the association as a section and the plan is being favorably considered.

H. B. Crouse, of the Crouse-Hinds Co., Solvay, N. Y., was elected president for the coming year. The divisional vice-presidents elected were as follows: Apparatus, N. A. Wolcott; Appliance, M. C. Morrow; Policies, C. L. Collins; Radio, L. B. Raycroft; Supply, W. E. Sprackling. Members of the board of governors elected for three years were H. B. Crouse, R. Edwards, A. L. Eustice, Otto H. Falk, W. L. Jacoby, J. M. Curtin, D. H. Murphy, R. J. Russell and F. E. Wolcott. I. A. Bennett was elected a member of the board for one year.

WOODBIDGE TO PRESIDE AT I. A. A. CONVENTION

C. K. Woodbridge, president of the Kelvinator Corp., is directing plans for the twenty-fourth annual convention of the International Advertising Association which is to be held in Detroit July 8 to 12. Adjunct to the convention will be the International Advertising Exposition.

In the 350 booths arranged in the Masonic Temple will be visual evidences of how advertisers operate. Printers, publishers, artists, engravers, motion picture concern and manufacturers of advertising equipment will have displays. Round about this exposition in the spacious Temple there will be 21 advertising bodies holding conventions at the same time, each dealing with a distinct field of advertising. More than 150 speakers are to address the sessions.

PROFIT PLUS GOOD WILL

An article must not only be sold at a profit, but also must carry with it a certain amount of good will, which encourages the customer to come back and keeps the store going next week and next year. Salesmanship should be directed to this end, and our whole policy of allowing exchanges and so forth is to insure the fact that our salespeople do not oversell a customer. In order to accomplish this, salespeople must be controlled by the store and must be definitely supervised from the customer point of view.

—From an address by Oswald W. Knauth, V.-P., R. H. Macy & Co., New York, at the N. E. L. A. Convention.

Pacific Power & Lighting Co. Sells 80 Units

Fifty-five General Electric refrigerators and 25 Electro-Kolds were sold in all the districts of the Pacific Power & Lighting Co., Portland, Ore., from January to May 1.

The Columbus Electric and Power Co., Columbus, Ga., has sold 55 General Electric refrigerators in the past six weeks.

A. S. Cole, Son & Co., Cranbury, N. J., have been named as agents for General Electric refrigerators with territory taking in Hightstown and the vicinity.

The San Diego Consolidated Gas & Electric Co., San Diego, Calif., opened a new appliance shop on June 16 in the Electric building on Sixth and E. Streets.

ELECTRO-KOLD SALES EXPECTED TO EXCEED \$1,000,000 IN 1928

Sales of Electro-Kold refrigeration equipment will total \$1,200,000 this year, according to H. L. Masterson, vice-president of the company. Sales to May 1 this year were three times the volume of the same period in 1927 and July is expected to be the peak month in the company's history.

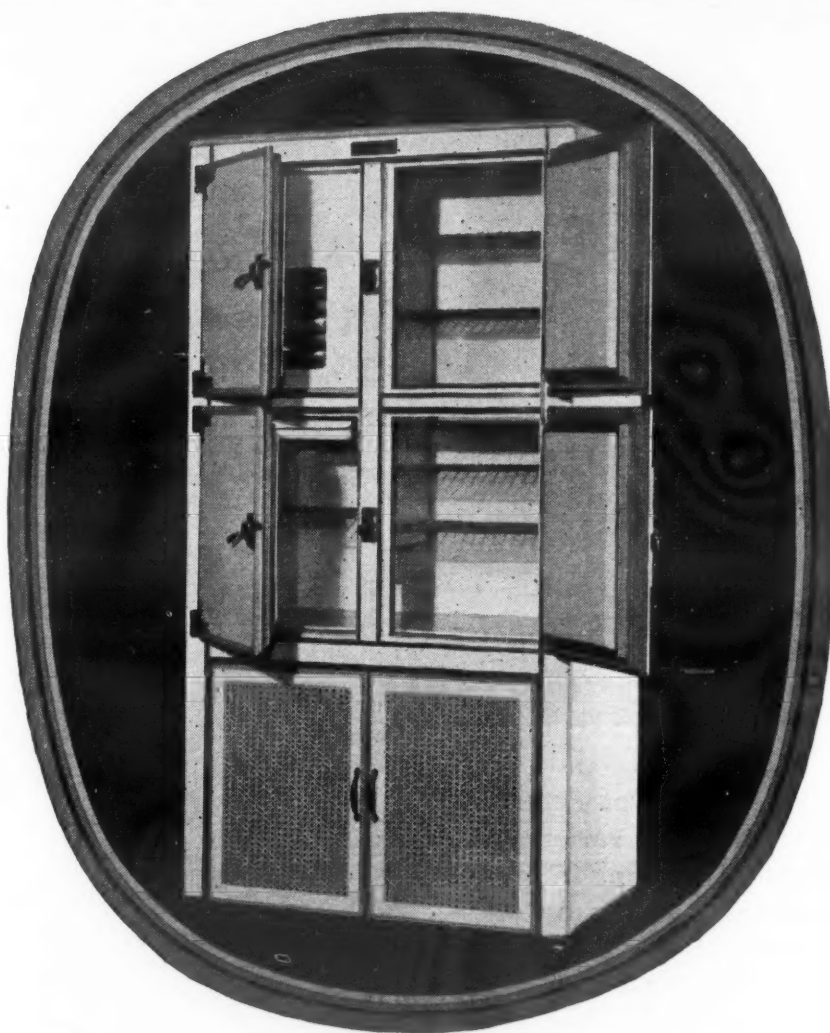
The number of Electro-Kold dealers in 11 western states has increased about 25 per cent this year over last year, there being now 225 dealers in these states.

E. S. Matthews, sales manager; J. J. Evans, service manager, and C. D. Ellis, district factory sales manager on the coast, attended several sales conferences last month. One was held in Seattle and the other in Oregon, western Washington and Oregon dealers attending.

Just before leaving for the coast, Mr. Matthews returned from a six weeks' trip, on which he visited all dealers in California, Arizona and Nevada. Regional sales meetings were held in Los Angeles and San Francisco.

North American Lt. & Pr. Co. Offers Prizes

Two large silver trophies and \$350 in cash prizes will be awarded to the sales team selling the largest number and greatest value of electric refrigerators and ranges by the North American Light & Power Co. The contest opened January 1 and will close on August 31. Awards will also be given to employees turning in best leads to each sales team. Assistant Vice-President J. W. Bush is in charge of merchandising operations.



Have you kept pace with Kelvinator development?

HAVE you investigated the new Kelvinator Electric Refrigerators? To anyone interested in the selling of home electric equipment, it will be well worth while to see what Kelvinator has done in the way of improvement and refinements.

The oldest electric refrigeration is also the newest... for Kelvinator is now being installed in the most complete and most beautiful line of cabinets we have ever made. There are small models which can be sold at prices well within the reach of any home of modest means. There are large models, finished in the most beautiful combinations of porcelain and French gray which are startling in their beauty of design and excellence of construction.

The central station can profitably investigate the new Kelvinator Electric Refrigerators.

Kelvinator Corporation
DETROIT



On Refrigerator Cabinets

New use for surplus factory space

A PLYMETL refrigerator cabinet, fabricated in flat sheets at our central plant, can be assembled anywhere with comparatively little floor space and a small investment in equipment. It offers an unusually profitable line for manufacturers or assembly plants with unused space. We furnish complete layout plans and detailed instructions covering the assembly operations. No charges are made for the use of our patented equipment.

Local assembly plants—either existing companies or new ones formed for this purpose—find a ready market in any city where three or more electric refrigerators are being sold daily. This is not solely a big city proposition.

The radical improvement in refrigerator distribution effected by the PLYMETL design, enabling the shell to be shipped flat, saves from \$6.50 to \$26.50 in shipping costs on each box. This tremendous saving much more than covers the assembly cost in the local plant and makes it possible for the assembler to compete on very favorable terms with big national distributors of refrigerator cabinets.

New in design and construction

A PLYMETL refrigerator cabinet is as different from the old ice box as electric refrigeration is from ice.

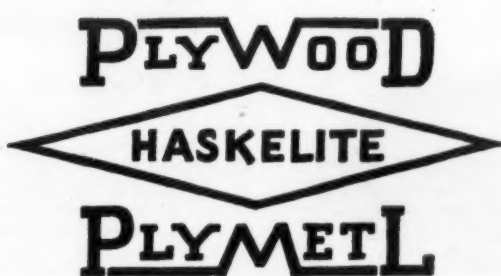
For example, consider the frame construction. In the PLYMETL box the wooden corner posts are entirely eliminated. The only frame used is around the door. The cork insulation can therefore be made continuous—no breaks at the corners and consequently greatly increased thermal efficiency.

There are no open joints in a PLYMETL cabinet. A single panel of PLYMETL forms the four vertical walls, being notched to allow bending at the corners. The outer steel sheet on this PLYMETL panel is unbroken and where the two edges meet in the back, the steel is turned in and firmly soldered. There are no cracks or joints through which the air can reach the insulation. This prevents condensation and decay which ruin so many cabinets.

A PLYMETL refrigerator is also distinctive in other features such as the Vitrolite lining, the door construction and the perfect exterior surface, making possible all of the latest finishing effects.

Geo. R. Meyercord, *President*

Haskelite
Manufacturing Corporation
120 S. LaSalle Street
Chicago, Illinois



Send for detailed information. The PLYMETL cabinet is new in design, construction, sales advantages, method of distribution and profit possibilities. Investigate this proposition for your territory before someone else secures this valuable franchise. An inquiry places you under no obligation.

Cooperation with Hat Store Results in Extra Publicity for Refrigeration



The Electric Refrigeration Co., W. 923 Sprague Ave., Spokane, Wash., secured this publicity by furnishing a G. E. refrigerator to Hart, Schaffner & Marx Clothes Shop. The display was placed May 15 (official straw hat day) and attracted crowds of people.

TECHNICAL DISCUSSION AND ENTERTAINMENT AT A. S. R. E. MEETING

(Continued from Page 6)

which have been made famous through their flights.

The annual Spring dinner-dance at the Statler Hotel was attended by approximately 175, with the ladies being well represented. George B. Bright, toastmaster, introduced Edgar A. Guest, well known American poet. The applause of the guests indicated the popular appeal of the verses read and the friendly manner in which they were presented.

Evans Tells of Advancements in Aviation

Edward S. Evans, president of the E. S. Evans Co., Detroit, and holder of the world's globe-circling speed record, told of some of his experiences in attempting to cross the United States at the end of his notable tour and pointed out the great advancement which has been made in the past two years in the construction of aircraft for trans-continental passenger service.

The Kelvinator orchestra provided music for dancing during and after the dinner and further entertainment was supplied by Joe Murphy and his "Icehouse Quartette" with over a dozen voices which sang a number of entertaining selections.

The Thursday morning session was devoted largely to the subject of the domestic refrigerator, the first paper being entitled "General Design of Refrigerator Cabinets of the Ice-Box-Household Type," by Harold L. Pope and J. Russell Brown of the Leonard Refrigerator Co., Grand Rapids. This paper, read by Mr. Pope, discussed the subject of satisfactory temperatures, the sizes of door openings, the elimination of objectionable odors, air circulation, arrangement of the refrigerator to provide the greatest utility value, ease of cleaning, beauty of proportion and finish, durability, and adaptation to mechanical refrigeration. Concerning the last mentioned subject, the paper stated that, "as a general rule a refrigerator cabinet operating satisfactorily with ice refrigeration may also be expected to operate satisfactorily with mechanical refrigeration providing, of course, that the dimensional characteristics of the cabinet permit the use of the correct size mechanical unit and that the term 'satisfactorily' implies the same merits in both cases."

Application of insulation to refrigerators was the subject next discussed in a paper by J. H. Bracken of the Celotex Co., Chicago. Mr. Bracken briefly discussed the work of insulation in a refrigerator and considered the various methods of improving its capacity to keep out heat, such as painting or wrapping. The importance of the proper installation of the insulating material in the cabinet was stressed. Mr. Bracken suggested that the Society set up a standard of heat transfer for household refrigerators and submit this standard to the manufacturers of domestic cabinets asking for its approval.

A paper entitled "Broken Ice Refrigeration," by C. F. Belshaw of the George B.

Bright Co., Detroit, revealed a number of interesting facts as to the use of broken ice as compared with chunk ice. A study made by Mr. Belshaw during the past two years and with a number of different types of household refrigerators reveals the fact that considerably lower temperatures may be obtained and without an appreciable increase in the ice melting rate by breaking up the chunk ice into small pieces, thus providing a greater ice area with which the air may come in contact. For example, one test in which a side-icer type of refrigerator was used revealed that the use of broken ice as compared with chunk ice brought a 16 per cent increase in refrigeration with an accompanying increase in the ice melting rate of only 3 per cent.

The test also showed that the use of 25-pound chunks of ice was more effective than the use of the same weight of ice in say 50 or 100 pound chunks. This is, of course, due to the increased surface provided by the smaller pieces.

This paper brought out considerable comment from various members of the Society. "Refrigerator Test Methods," a paper by W. F. Grupe, chief engineer, Cork Import Corp., New York, provoked a lengthy discussion as to the type of apparatus most suitable for testing the domestic refrigerator considering the fact that the average manufacturer does not have elaborate apparatus which is often recommended. Mr. Grupe described his equipment for testing refrigerators and told how it was used. A number of other members interested along this same line discussed the feasibility of the use of the equipment described by Mr. Grupe in the plants of the average manufacturer. In line with this general discussion, C. F. Kayan, of the University of Columbia, read a short paper on the methods which he is using to test refrigerator cabinets at this institution.

This interesting discussion was only brought to a close by the fact that an inspection tour was scheduled for one-thirty that afternoon and the time allotted for the morning program had already been overrun. It was suggested, however, that those interested in refrigerator test methods get together and discuss this important subject at some future date.

Ice and Electric Refrigeration Plants Visited

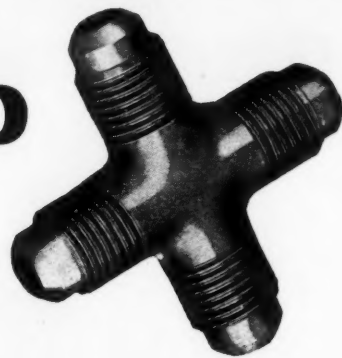
The four-day meeting was brought to a close Thursday afternoon with an inspection tour of the Detroit City Service Co. plant number 16, where the guests saw a number of operations in the manufacture of artificial ice, and an inspection of the Kelvinator Corp. plant on Plymouth Road, where they observed the production of electric refrigerators.

According to members of the Society, the fifteenth western meeting was one of the most successful held in the history of the organization. The first day's registration at the meeting appeared on page 26 of the June 6 issue of ELECTRIC REFRIGERATION NEWS. The following names were added during the balance of the convention:

Alexander, A. B., Pittsburgh, Pa.
Arens, Otto C., Pittsburgh, Pa.
Baker, Paul W., St. Louis, Mo.
Barnes, Geo. F., 3673 Madison St., Gary, Ind.
Beals, A. E., Cleveland, O.
Blood, Howard E., Detroit, Mich.
Bracken, J. H., Michigan, Chicago, Ill.
Braun, Roger K., 70 W. Euclid, Detroit, Mich.
Bray, W. J., 230 So. Clark St., Chicago, Ill.
Bright, Geo., Tulsa, Okla.
Brown, Edwin H., Copeland Products Co., Detroit, Mich.

Chamberlain, H. G., 6390 Tuxedo, Detroit, Mich.
Chapman, Chas. W., 8550 Dumbarton Rd., Detroit, Mich.
Chute, Geo. M., Gen. Electric, Detroit, Mich.
Craig, R. H., 12319 Monica, Detroit, Mich.
Crone, Vernon W., 14030 Hubbell Ave., Detroit, Mich.
Cummings, S. R., Canton, O.
Cutler, Clarence W., Chicago, Ill.
Doeg, R. W., Detroit, Mich.
Doremus, R. C., 3245 Pingree, Detroit, Mich.
Dougherty, Warren, O.
Eggleston, T. W., Detroit, Mich.
Elder, T., Century Elec. Co., St. Louis, Mo.
Erbach, Fred R., 14011 Forrer Ave., Detroit, Mich.
Fairbanks, F. L., Boston, Mass.
Farrington, Ray P., Philadelphia, Pa.
Fessenden, C. H., Ann Arbor, Mich.
Frazier, Robert T., Chattanooga, Tenn.
French, 120 S. LaSalle St., Chicago, Ill.
Gomon, R. L., 337 Curtis Bldg., Detroit, Mich.
Gallenkamp, Jr., Chicago, Ill.
Garrison, C. E., 610 Green St., Flint, Mich.
Grupe, W. F., 345 W. 40th St., New York City.
Hakle, Arthur, 3305 Gratiot, Detroit, Mich.
Halterman, H. R., Chicago, Ill.
Hanson, Paul L., Buffalo, N. Y.
Hays, H. B., Chicago, Ill.
Holcombe, E. M., Carbondale, Pa.
Horner, R. K., Flint, Mich.
Jewett, Earold C., Kodak Pk., Rochester, N. Y.
Kittoe, Geo. H., Canton, O.
Koch, L. E., Elkhart, Ind.
Larson, Ellis, Flintlock Corp.
Leeson, Chas. B., 121 Garrison, Dearborn, Mich.
McCabe, E. B., Carbondale, Pa.
Mason, G. W., Detroit, Mich.
Mile, Daniel, Seward Hotel, Detroit, Mich.
Nelson, Owen F., 17124 St. Paul Ave., Grosse Pt. Village, Mich.
Naegely, John E., Ft. Clark Hotel, Detroit, Mich.
Parkhurst, W. A., Armour & Co., Chicago, Ill.
Pendergast, T. S., 1521 Collingwood Ave., Detroit, Mich.
Penn, Ralph, 306 12th St., Des Moines, Ia.
Pierdon, 2111 S. Saginaw, Flint, Mich.
Putnam, Midland, Mich.
Rasch, W. C., 2319 York Rd., Huntington Woods, Mich.
Samp, 3508 Cortland, Detroit, Mich.
Schlingman, Paul.
Towne, Willis H., Chicago, Ill.
Vince, Gerard, 345 E. 40th, New York, N. Y.
Voss, W. O., York, Pa.
Ward, Norge Corp., Detroit, Mich.
Wells, 2662 Leslie, Detroit, Mich.
Whitesell, A. W., 646 Hazelwood, Detroit, Mich.
Wilson, Carroll L., 2499 Elmhurst, Detroit, Mich.
Wilson, Edw., 5219 Delor St., St. Louis, Mo.
Wright, B. F., 4928 Maplewood Ave., Detroit, Mich.
Wyllie, John, Jr., Detroit, Mich.
Yarnell, J. N., 8100 E. Jefferson, Detroit, Mich.
Zieber, W. E., 112 S. Penn St., York, Pa.

A FORGED BRASS CROSS



For use in

Apartment House Multiple Refrigeration Installations

THIS cross fitting takes the place of two "T" fittings in cases where kitchens are on opposite sides of same wall. Since only four connections are required as compared to six where "T" fittings are used, the danger of leakage is reduced one-third.

We manufacture a complete line of fittings for connecting small size brass and copper tubing. Our fittings are made of forged brass especially designed to meet mechanical refrigeration requirements.

Send sample or blueprint for quotations on parts of a special nature.

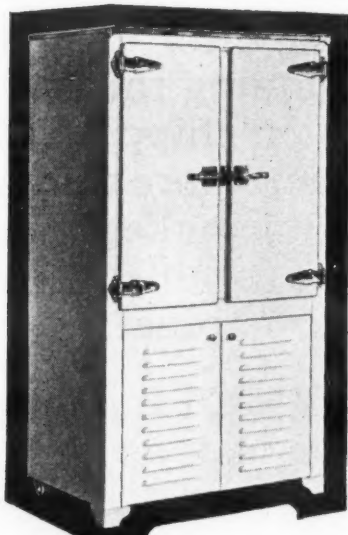
Catalogue No. R-30, showing our complete line of standard fittings, will be mailed on request.

COMMONWEALTH BRASS CORPORATION
DETROIT 5781-5835 COMMONWEALTH AVE. MICH.

Your copy of the beautiful Rex Portfolio which illustrates the complete line of Rex Cabinets is ready. May we send it?

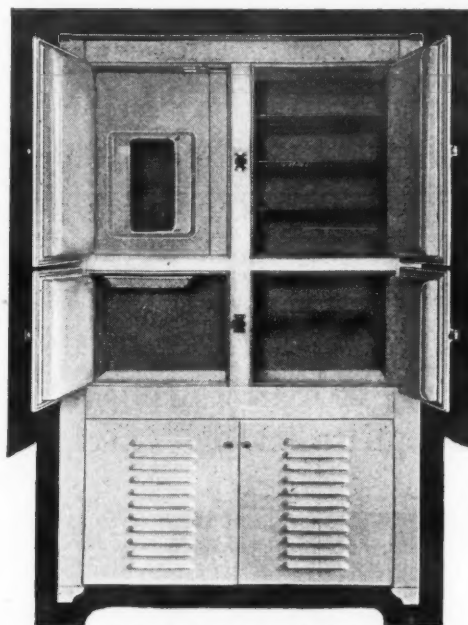
RESIDENCE MODELS

Rex Cabinets are available in a wide range of sizes and for any type of installation. Any standard refrigerating unit fits any Rex Cabinet.



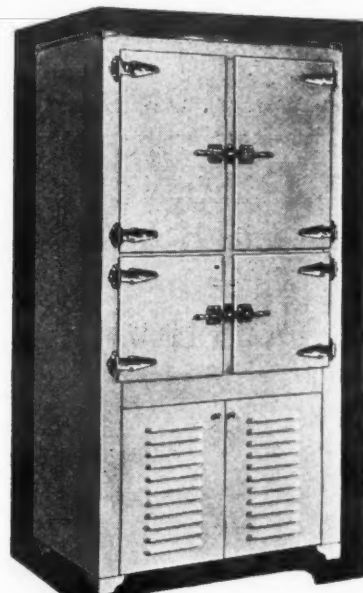
Models 205 and 305

Model 205.....Lacquer Exterior
Model 305.....Porcelain Exterior
Porcelain Interior on Both Models
Food Storage Capacity 5.5 cu. ft.
Overall Dimensions
Height 58" Width 31 1/4" Depth 20 1/4"



Models 202 and 302

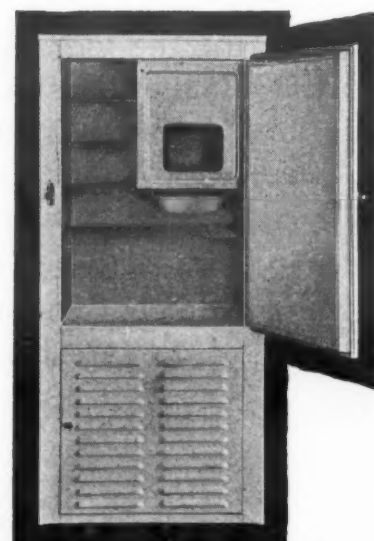
Model 202.....Lacquer Exterior
Model 302.....Porcelain Exterior
Porcelain Interior on Both Models
Food Storage Capacity 11.9 cu. ft.
Overall Dimensions
Height 70 1/4" Width 44 1/2" Depth 23 1/4"



Models 201 and 301

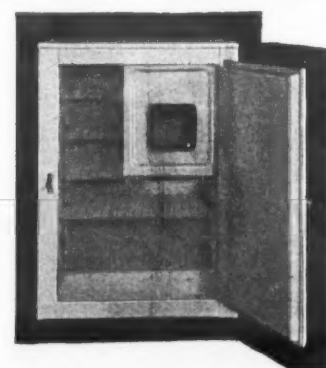
Model 201.....Lacquer Exterior
Model 301.....Porcelain Exterior
Porcelain Interior on Both Models
Food Storage Capacity 8.5 cu. ft.
Overall Dimensions
Height 69 1/4" Width 35" Depth 22 1/4"

APARTMENT HOME MODELS



Models 100 and 103

Model 100.....Lacquer Exterior
Model 103.....Porcelain Exterior
Porcelain Interior on Both Models
Food Storage Capacity 4.4 cu. ft.
Exterior Depth 19 1/4 in.
Exterior Width 26 1/4 in.
Exterior Height 57 1/2 in.



Models 102 and 105

Model 102.....Lacquer Exterior
Model 105.....Porcelain Exterior
Porcelain Interior on Both Models
Food Capacity 4.4 cu. ft.
Exterior Depth 19 1/4 in.
Exterior Width 26 1/4 in.
Exterior Height 36 1/4 in.

Exterior—Lacquer
Interior—Enamel or Porcelain



Models 101 and 104

Model 101.....Lacquer Exterior
Model 104.....Porcelain Exterior
Porcelain Interior on Both Models
Food Capacity 4.4 cu. ft.
Exterior Depth 19 1/4 in.
Exterior Width 26 1/4 in.
Exterior Height 52 in.

Exterior—Lacquer
Interior—Enamel or Porcelain



REX MANUFACTURING CO., CONNERSVILLE, IND., U.S.A.

General Electric, Frigidaire and Kelvinator Dealers in Fresno Plan to Sell 6000 Units in 1928

Great Growth in Popularity of Electric Refrigeration in the Rural Districts of the San Joaquin Valley Area

WITH three energetic dealers in the city of Fresno, California, mapping out a sales campaign calculated to move close to 6,000 electric refrigerators during 1928, the San Joaquin valley area of that state is leading all other rural areas in electric installations.

Frigidaire, General Electric and Kelvinator are the makes which are being pushed actively in this district. Frigidaire has a local distribution

office which handles only Frigidaire products. They have set their sales quota for the year at 2,500 machines. General Electric is being handled by the Valley Electrical Supply Company through its refrigeration department. They likewise have a sales quota for 1928 of 2,500. Kelvinator is handled through a local Hot'n Kold shop, and is limited to a territory of four counties as contrasted to approximately ten served by the other companies. Their sales quota this year will run close to 1,000 boxes.

Farmers in the San Joaquin Valley district are realizing rapidly that electric refrigeration is both profitable and pleasant to the rural dweller. Already possessed of power service and equipment installed for widespread agricultural and irrigation purposes, farmers in this area are installing electric household equipment as the next logical step.

Total Previous Sales Not Over 4000 Machines

Prior to this year electric refrigeration sales units operating in the valley have devoted themselves largely to educational efforts. The total of all previous sales is probably not over 4,000 machines. This year the dealers are engaged in concerted efforts to realize on the careful educational efforts already expended. Indications are that they will be able to do so as all of them are already well ahead of their quotas at this time, with the hot summer months only just arriving.

Another factor in the increasing use of electric refrigeration in the valley area has been the active and successful efforts of the San Joaquin Light and Power Corporation to increase the average domestic load. During 1927 they had succeeded in raising the average kilowatt hour consumption per consumer to 642, while the average for the United States in 1926 according to the U. S. Bureau of Census was 400.

Estimated figures show that approximately 60 per cent of these electric refrigerator sales are made in the small towns and rural districts. Here the farmer is faced with a difficult problem in cooling. Summer temperatures in the valley are generally in the 90's and there is slight provision for rural delivery of ice. The farmer who must journey to town for ice wastes time as well as the cost of furnishing his own transportation. Many of them are finding that they save money, disregarding the great convenience and service furnished, by the installation of electric refrigeration.

In the city districts, although there is not the question of saving in dollars and cents, many buyers are being sold on their convenience and pride of ownership afforded by the possession of an electric refrigerator.

The Frigidaire Plan of Operation

All three of the major dealers in this area are operating under slightly differing plans. Frigidaire, through its office in Fresno, has established cash dealers in Visalia, Madera and Los Banos. Each of these dealers has several sub-dealers at nearby points. The dealers maintain their own installation and sales forces. In handling sales on larger commercial units, where the technical details are such as would be too involved for the local dealer, a special commercial equip-

ment salesman is sent from the Fresno office to make the sale, credit for which goes to the local dealer in whose territory it is made. There is also a supervisor working with each dealer. His duties are to see that equipment is operating satisfactorily and to assist the dealers as far as possible.

General Electric Handled by Valley Electrical Supply Co.

General Electric is handled through the Valley Electrical Supply Company with stores in Fresno and Bakersfield. Besides these stores the company has placed agencies for electric refrigerators with dealers in all of the smaller towns of the area. These dealers are not confined to the sale of electric refrigerators, but often are either electric supply shops, or even general or hardware dealers.

The supply company has been able to assist these dealers and to entice them so that their sales are a powerful item in the company's total. Shipments to such dealers are made direct and do not come through the company's stores. General Electric sales are made on a basis of service and the dealers do their own installation work with the advice and assistance of experts from the central offices. No service departments are maintained as units that are not giving satisfaction are replaced with new units.

Kelvinator Sold by Hot'n Kold Corp. in 4 Counties

Kelvinator is marketed through the local Hot'n Kold shop, one of seven established by the Hot'n Kold Corporation of San Francisco. The Hot'n Kold shop of Fresno is the distributor for the four immediately surrounding counties and has established branch shops and dealers where business prospects warrant it.

The Hot'n Kold shop business includes the marketing of all major electric appliances as well as electric refrigerators. In this way the Hot'n Kold salesman is able, on one contract, to sell a complete installation. Managers of this group feel that such a combination is of great value in making sales. In Fresno they have just signed the only two new apartment houses in the city on all appliances.

For the benefit of their dealers a complete showroom is maintained at the Fresno shop with an expert floorman in charge. There the dealers may bring a prospect and the sale will be helped by the floorman as well as by the complete display of equipment.

Working out of the Fresno shop are a field man and a service and installation man whose duties are to help the dealers in every way possible.

Copeland, Electric and Servel Also Active

Other makes of refrigerators sold in Fresno, about which no data is available, are the Copeland, handled by a local department store, and the Electric, handled by a local music dealer.

The Servel gas unit is being handled in Fresno by the local office of the Pacific Gas and Electric Company who furnish gas for this territory. Up to June 1 they have devoted their efforts to display and education, but have now started a campaign with a crew of men in the field in the city of Fresno.

400,000 FARMS NOW SERVED BY ELECTRIC LINES

The home has been made a much more livable institution and the burden of the housewife greatly lightened through the introduction of the many domestic appliances which have demonstrated their worth. During the year 1927 one and one-quarter million homes were furnished with electric service for the first time.

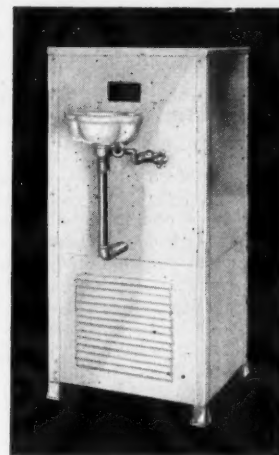
Electric service on the farm has become a practical reality. Some four hundred thousand farms are now receiving electric light and power company service, and the farmer and his family are enjoying a standard of living and comfort hitherto unknown through the many profitable applications of electricity to farm homes and farm work. Mass production has reduced the cost of generation and the public has received benefits therefrom. Today electric service is being furnished over wider areas and at a lower cost per unit to the consumer than ever before.

—From an address by H. T. Sands, retiring president of the National Electric Light Association.

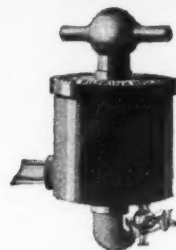
NEW COMPANY TO MAKE WATER COOLERS

The Electric Water Cooler Co., Springfield, Mass., has been incorporated by William W. Morency and Robert K. Noble, of Springfield, and Pearl K. Fuller, of Gardner, Mass., to manufacture electric water coolers.

FRIGIDAIRE DEALERS!!



Model No. 1A, with Filter-Bubbler



No. 3 FILTER for use with every cooler... priced at only \$15.

Here's a way to increase profits!

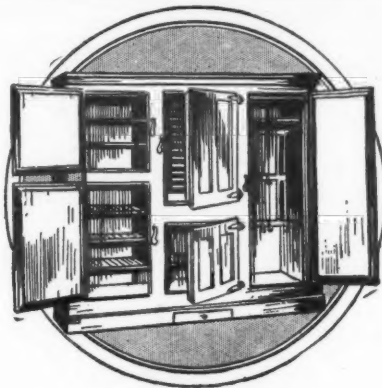
The demand for electrically cooled drinking water coolers is sweeping the country... Banks, theatres, restaurants, hospitals, factories, offices, stores are potential buyers... now is the time to meet their demand with coolers of proven dependability... **FILTRINE-FRIGIDAIRE WATER COOLERS!**

Factory Approved

Built by an organization famous for fifteen years... Equipped with Frigidaire units... Backed by the reputations of both companies... **FILTRINE Water Coolers** are the most modern, most scientific, most dependable coolers... the coolers of tomorrow, obtainable today... the coolers that meet "peak" demands... the coolers that give continuous, trouble-free satisfaction... Write for details.

The **FILTRINE**

Manufacturing Co. - 49 Lexington Ave., Brooklyn, N. Y.
Manufacturers of Coolers and Filters of All Sizes



Over 250,000 SATISFIED Users

"To the dealer in electrical refrigeration of any type, the prestige of McCray as a builder of fine cabinets has real profit value."

PIONEER in modern sanitary refrigerator construction, for 38 years McCray has held to an unyielding ideal of quality which is reflected in the remarkable service records of McCray installations.

McCray users have always been our best advertisements. This army of over 250,000 satisfied customers is striking evidence of that leadership which is further revealed in the fact that McCray is the world's largest manufacturer of refrigerators for all purposes.

In single stock units and complete built-to-order installations for the largest institution, McCray quality is held to this single high standard.

All McCray models may be used with electric or mechanical refrigeration of any type, or ice. Pure corkboard, sealed with hydrolene by a distinctive process, provides perfectly air-tight insulation.

Send for latest catalogs and further information about refrigerators to meet your specific need. No obligation, of course.

MCCRAY REFRIGERATOR SALES CORPORATION

Dept. 66. Kendallville, Indiana

SALESROOMS IN ALL PRINCIPAL CITIES (See Telephone Directory)

Copeland Display in San Francisco



The popular combination of electric refrigeration and radio are displayed in the salesroom of Arthur Dahl, 470 Sutter St., San Francisco, Copeland dealer.

MCCRAY REFRIGERATORS

Extensions of Central Station Service in Columbia Enlarge Market for Electric Refrigeration

Cubans Doing High Grade Installation Work

R. A. Lundquist, director of export sales for the Kelvinator Corp., who has recently returned from a six weeks' trip through Cuba, Columbia, and Panama, reports an increased interest in electric refrigeration in these countries.

"The Cuban market is developing nicely," says Mr. Lundquist, "not only in the household, but in the commercial field. Electric refrigeration is going good in meat markets and in apartment houses. Installation work is thoroughly well done in Cuba and this condition is most helpful in establishing a reputation for satisfactory service."

In Columbia the market is being expanded due to the development of central station plants and transmission systems. For example, the American & Foreign Power Co. has acquired the system in Barranquilla and is rebuilding it so as to provide an ample current supply. The shortage of generating capacity has been one of the principal difficulties in the past. At Medellin, Columbia, contracts have been let for a new plant which will open up the market in that community. In Cartagena the municipal plant authorities are actively interested in building up the

electric refrigeration load. Many new consumers for electric service are being added to the lines and greatly increase the potential market for refrigeration equipment. A large housing development in the western part of Columbia, which is being put through by an American company, has also largely expanded the prospective field for electric refrigeration. More than two thousand houses are being built in this district at an average cost of two thousand dollars each. "People who know Columbia," says Mr. Lundquist, "are not surprised at this activity since the resources of this country are considerable, being second only to Brazil." The only drawback in Columbia at present is the rate charged for electricity which in some places runs as high as twenty-five cents per kilowatt-hour.

Among the interesting commercial developments in Columbia has been the improvement of service up the Magdalena River. The Columbia Steamship Co. is now operating boats regularly and it is a matter of interest that these boats were built in Charleston, West Virginia, and were delivered by being floated down the Ohio and Mississippi rivers and across the Gulf.

Four G.E. Models Shown in Revolving Outdoor Display



Moving Exhibit at Charlotte, N. C.

Glasgow-Stewart & Co., Charlotte, N. C., have a novel display somewhat similar to a regular outdoor painted board, the center of which is devoted to a glass-enclosed room, very much like a window or small sales room.

Four General Electric refrigerators placed on a slowly revolving table, give the passerby an opportunity to see four models and to view them from every angle.

An attractive color scheme enhances the display. The background and flooring is

covered with blue and orange crepe paper. The side walls are painted light blue.

Naturally, here is an opportunity for brilliant night lighting. Mr. R. A. Lang, Manager of Glasgow-Stewart & Company, has taken full advantage of it.

This display is, in reality, an animated window display located at a prominent place where the volume of pedestrians and vehicular traffic is great. The fact that it has motion, considerably increases its attention-getting value.

Electric Refrigeration Provides Exact Temperatures Required for Bakeries

MECHANICAL refrigeration is the only solution to the cold storage problems of the commercial cake baker, Peter G. Pirrie, of the engineering staff of *Bakers Weekly*, stated in an article published May 26, in which he pointed out the need for standardized refrigeration equipment in that field.

Many of the baker's raw materials are perishable, he uses eggs, milk in liquid form, syrups, all of which must be stored to keep from spoiling. Ice, he pointed out, provides a wet cold and in no way can the temperature be regulated to suit the bakers exacting needs. The minimum temperature which it is possible to realize is often higher than that desired for certain purposes.

Should the baker pasteurize his own milk, it must be cooled from approximately 142 degrees F., to 50 degree F. The milk flows through a cooler and the amount of heat, which must be abstracted from the milk, will be equal to the weight of the milk times its specific heat times the drop in temperature. The specific heat of milk is .847 and the drop in temperature is 92 degrees. Consequently with the milk flowing at the rate of 30 lbs. a minute the abstraction of 2,337 B. T. U. would occur in the same period. This would require 12 tons of refrigeration capacity to accomplish the result.

One of the most important operations in the cake bakery is the creaming of the sugar and shortening. Until recently, it was not common knowledge that the temperature at which this creaming process is performed has a very pronounced effect on the results obtained. Experiments, however, have been made and published which show that, when sugar and shortening are creamed without any definite control of temperature, sometimes one result and sometimes an entirely different one is obtained even though the nature and the proportions of the two ingredients and the length and type of mixing are the same. Investigation has proved that temperature

is the factor that plays the important part in the creaming process.

Upon further experiment, it was found that there was a definite relationship between the creaming volume and the final cake volume, and that this relationship depends entirely on the temperature during the creaming. This principle remains true, regardless of the particular shortening used, excepting that the exact temperature which is best for one shortening may not be the same for another. This important detail is being followed up both experimentally and under practical conditions. The general method of procedure is to construct the workrooms in which these mixtures are prepared just as if they were to be used as cold storage boxes. The exact temperature at which they are to be maintained is, of course, not close to freezing but may be as high as 80 degrees in some cases. The important consideration is that this temperature be maintained within very narrow limits, regardless of the season of the year.

The installation of refrigeration equipment would justify the time, care and expense involved when the uniformity and definiteness of results are taken into consideration. Inasmuch as the yield of the finished is very much affected by the temperature at which the ingredients are incorporated into each other, there is a definite balance to be realized between the expense involved in setting up proper temperature control and the market value of finished product.

In addition the baker could use his cooling equipment for conditioning and setting icings. Ordinary air most generally contains more moisture than desired and the excess amount of humidity could be removed by passing the air through a tunnel which comes in contact with the cooling coils. Cold water required for certain mixtures could also be cooled in this way by the baker.

Frigidaire Branch Manager Appointments

H. J. Walker, Jr., of Detroit has been appointed manager of the Dayton Frigidaire sales branch. Mr. Walker joined the Frigidaire force in 1925 and in a short time was promoted to sales manager of the Detroit branch.

R. H. Graham, formerly regional manager of the Frigidaire Corp., has been made manager of the Baltimore branch. Mr. Graham was promoted to regional manager a year ago, coming from the Philadelphia branch.

E. A. Greenwald, formerly in charge of the Baltimore branch will join the factory organization at Dayton.

Electric Refrigerator Sales Increasing

Projects in which electrical apparatus will hold an important place show marked activity throughout the country, and the outlook for business in the summer months is very encouraging, says *Electrical World*. Sales of electric refrigerators are gaining, especially in the east and south.

Hungarian Dealer in U. S.

Eduard Frey, member of the firm of Arthur Hahn & Co., Budapest, Hungary, recently visited Dayton, Ohio, to discuss Frigidaire sales with officials of the company.

New Company in Charleston, S. C.

Heinsohn Electric Refrigeration Co., Inc., of Charleston, S. C., was recently organized with J. Henry Heinsohn, Jr., president and treasurer and F. A. Bailey, Jr., vice-president and secretary.

Refrigerator Sales Exceed Washers, Ironers and Vacuum Cleaners in Ohio Campaign

Public Service Company Sells 283 Units in May

The New Business Department of the Ohio Public Service Co. concentrated its efforts during the month of May on refrigeration, washers and ironers and vacuum cleaners, and based on a quota basis, Sandusky led for refrigeration with 122.9%; Elyria for washers and ironers with 102.4%; and Ashland with 70.6% for vacuum cleaners.

The total sales for May when the books closed on the 26th, were as follows:

Division	Refrigeration	Wash. & Ir.	Vac. Clean.
Alliance	18	15	8
Ashland	31	14	12
Elyria	21	42	19
Lorain	32	33	12
Mansfield	14	28	30
Massillon	48	35	8
Port Clinton	12	8	4
Sandusky	75	22	16
Warren	32	53	31
Total	283	250	140

SPECIFY ANSUL SULPHUR DIOXIDE

Write Us—

There is a Satisfied User Near You

The Product With a Factor of Safety

ANALYZED SULPHUR DIOXIDE

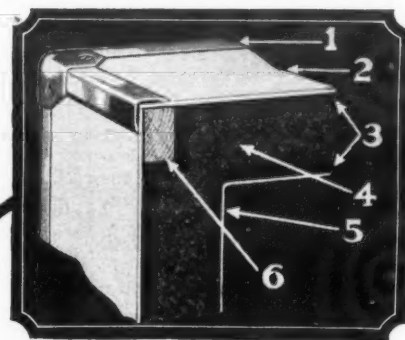
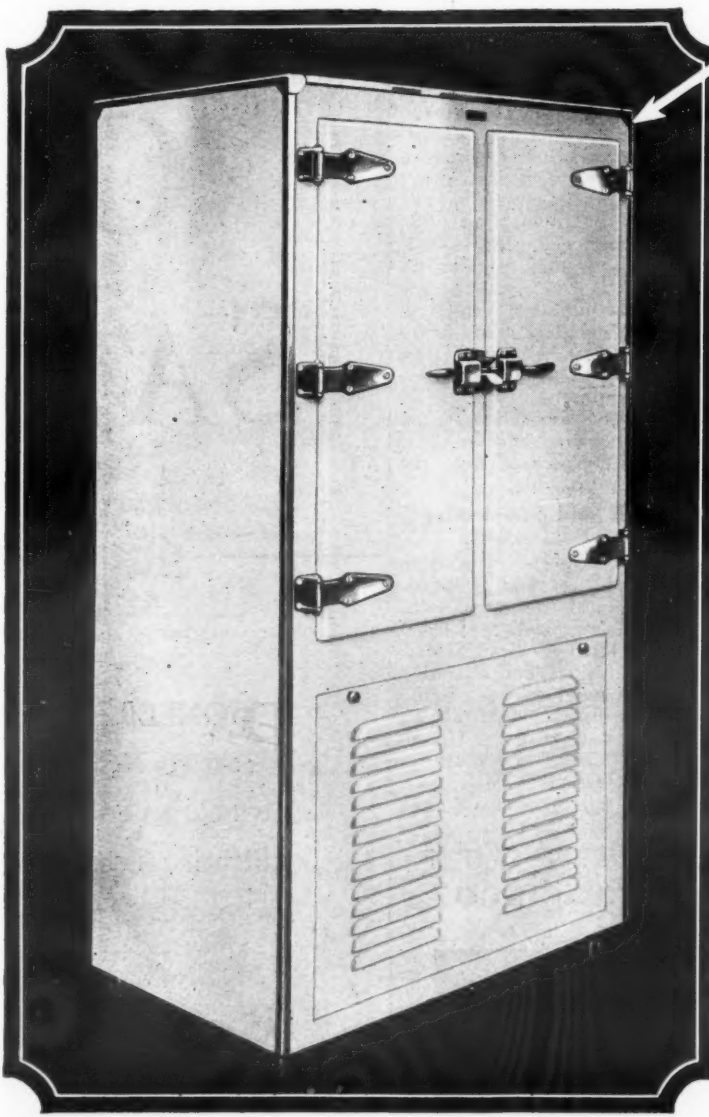
Absolute Protection for Refrigeration

ANSUL CHEMICAL COMPANY

MARINETTE, WIS.

Canadian Distributor: Grasselli Chemical Co., Ltd.
Toronto—Montreal

A permanently Moisture-proof Refrigerator



Hermetically sealed corkboard insures perpetually dry insulation regardless of the length of service.

- 1.—Mirror finish Monel Metal trim.
- 2.—Porcelain or lacquer exterior steel sheets.
- 3.— $\frac{1}{8}$ " Hydrolene between insulation, liner and outside sheets.
- 4.—Pure corkboard insulation.
- 5.—Porcelain inside liner.
- 6.—Moisture protected wood frame.

Hydrolene forced in under pressure

The $\frac{1}{8}$ " space between the insulation, liner and the outer steel sheets is filled with hydrolene forced in under pressure at 400 degrees of heat. This drives out all the free air, hermetically sealing the cork and insuring dry insulation indefinitely, and protects the outside sheets from corrosion.

Manufacturing facilities for a tremendous volume of business

The combined resources of three great companies are back of this long service cabinet: The Erie Art Metal Company, Erie, Pa., the Erie Metal Furniture Company, Erie, Pa. (under one management) and the Knox Products Company, Wilmington, Del.

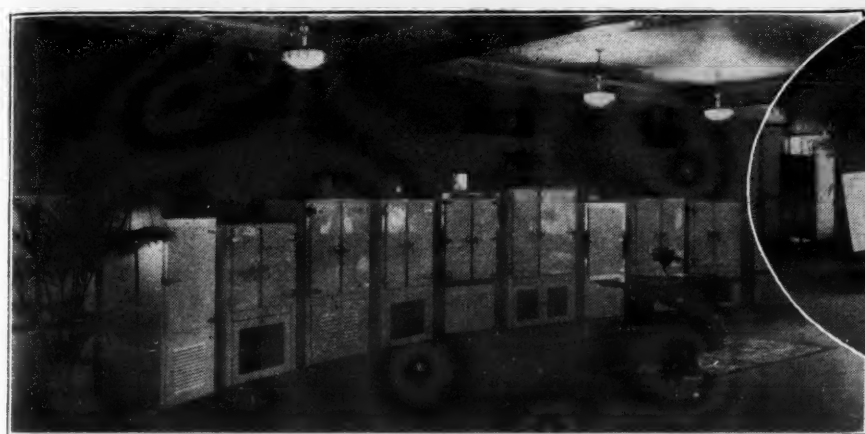
Address

**Erie Art Metal Co.
Erie Metal Furniture Co.
ERIE, PA.**

**Knox Products Company
WILMINGTON, DEL.**

Brooklyn Edison Company Shows 90 Refrigerators in Great Exhibition to Public

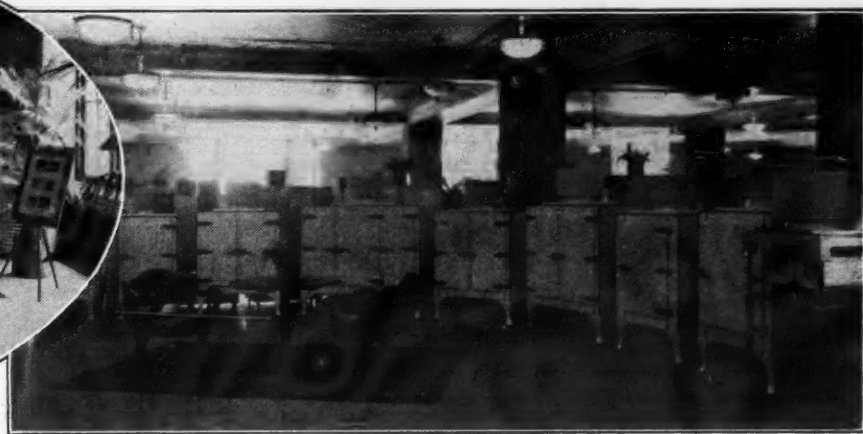
The Brooklyn Edison Company opened the new section of its main showroom in the Company's general office building at Pearl and Willoughby Streets, Brooklyn, with an electric refrigeration exhibition. The show ran for four weeks, from May 14 to June 9 inclusive. More than ninety different types of refrigerators, including both domestic and commercial installations, were on display. The manufacturers represented in the exhibition were General Electric, Copeland, Frigidaire, Kelvinator, Welsbach, Ice Maid, Servel and Iroquois.



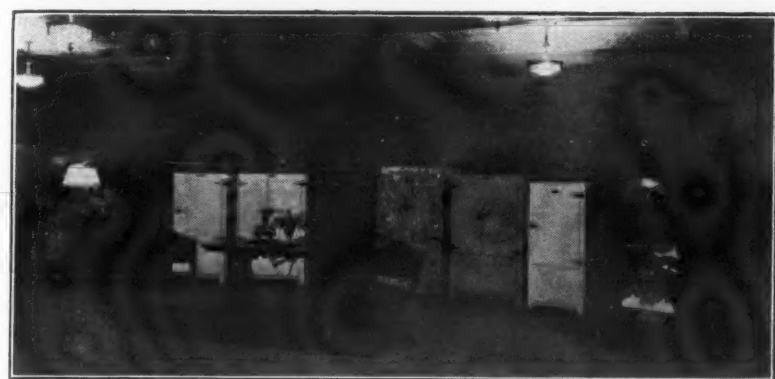
An Enticing Display of De Luxe Models by Copeland.



Color Charts Show How It Works.



"On the Top" Feature Distinguishes General Electric.



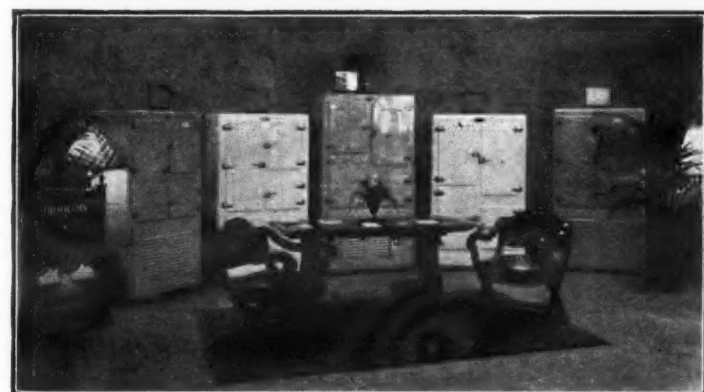
The "Low Pressure" Welsbach in Harmonious Colors.



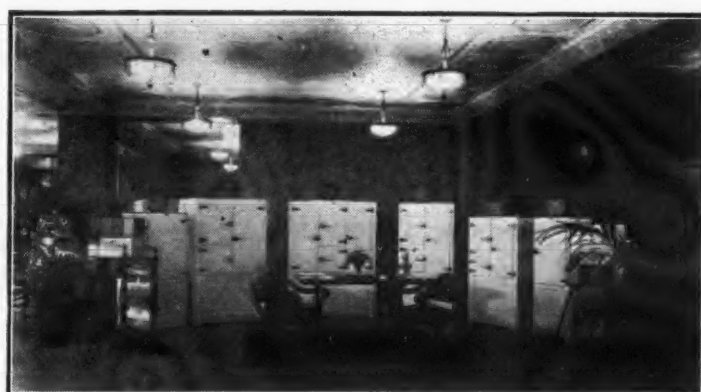
Imposing Entrance of Showroom.



The Servel Exhibit of Pleasing Multitone Effects.



Iroquois Electrics in a Luxurious Setting.



An Attractive Corner for Ice Maid Units by Lamson.



An Inviting Variety of Sizes by Kelvinator.

Stress Health Appeal to Show Need for Electric Refrigeration With a Well Constructed Cabinet

By John Girdler

THE growth of electric refrigeration is chiefly dependent upon the spread of the campaign of education concerning the proper preservation of food, according to I. M. Graham, sales manager for the Household Division of the Du Bosc and Pratt Frigidaire Company, 453 Locust Street, Long Beach, California.

"A popular scientific study, recently published, shows that less than six per cent of all ice boxes sold, cost the purchaser more than one hundred dollars. The great majority of these ice boxes are made to meet the popular price demand and range in retail cost from twenty to thirty-eight dollars," said Mr. Graham. "It is more than a reasonable supposition, it is positive fact, that a safe and sanitary cooling plant cannot be constructed for twenty dollars nor even for thirty-eight."

"The cheap box is very wasteful of ice. More important is the fact that the cheap box is equally wasteful of food. Most important and most treacherous, is the fact that the cheap box is positively dangerous to health. Bacterial growth defies the vision. It is usually first noticed by the sense of smell and when foodstuffs have put out such a danger signal they are a very active menace. This is perhaps the worst feature of the cheap cooling plant."

"The germ theory of disease is relatively new. Probably we do not know all that there is to know about bacteria yet, but the person of average intelligence and education is not likely to want to take any chances with anything as formidable as micro-organisms. We have found here that graphic illustrations of the almost unbelievable growth of bacteria are valuable

sales help. If we tell a prospective buyer that bacteria cause the souring of milk in twenty-four hours that means little more to the average home owner than the probable loss of a bottle of milk. But, if we show a set of pictures, showing the counts of bacteria under natural conditions and under electric refrigeration conditions the difference is so marked that it usually makes a profound impression."

"The same is true of fruit, meat or cooked foods that have been left over. While molds are perhaps not so dangerous as bacteria in raw foods they are certainly distasteful and the fastidiously clean housewife is most naturally appealed to by the suggestion that electric refrigeration will prevent spoiling and its attendant disagreeable consequences. If we can show that milk with a bacterial count of two hundred thousand per cubic centimeter, (the count usually allowed by city ordinances) will spoil in twenty-four hours in an outside cooler or in an inefficient ice box and then can show that with electric refrigeration, keeping a steady temperature of forty-three degrees, the same grade of milk will keep for six days with the considerable increase of one hundred eighty thousand per cubic centimeter, even

ICE WATER FOR THE DEMOCRATS

Twenty General Electric water coolers will furnish a supply of ice cold water for the Democratic delegates, both in the main building and in the hospitality house, according to E. B. Edmundson, of the Radio Lighthouse, Inc., distributor in Houston and the adjacent trade territory.

Owing to the high temperature of the tap water in the location of the convention hall, the problem of serving plenty of ice water has been given considerable attention.

the uneducated person can see that electric refrigeration almost performs miracles. "To apply these principles of salesmanship more particularly to Long Beach and its environs it would be fair to say that Long Beach is a 'raw milk' city. I believe raw milk is more popular than pasteurized milk. It is a well known fact that raw milk will sour more quickly than pasteurized milk. We use this argument to overcome sales resistance in this territory."

"Our work is very pleasant," Mr. Ingraham concluded. "There is a challenge to our sales ability. There is a technical side to the thing and we must go to school every three months to keep in good standing with the organization. We know, that when we make a sale, we are doing the purchaser a favor. We are selling him something that will safeguard his health, save him money, give him the pride of ownership and add to his comfort and leisure."

The Du Bosc Pratt Company keeps one refrigeration engineer who recommends types of boxes for definite purposes and has charge of the servicing of all of the sales of the organization. Twelve boxes

are kept in stock and these cover the most popular types. One day service can be had from Los Angeles on any type of box made by the manufacturers. Frost coils are occasionally installed in ice boxes but the practice is usually discouraged. Unless the box is an expensive one and unless it is in exceptional state of repair a new plant is recommended. There is considerable humidity in the air at Long Beach. The installation of electric refrigeration tends to produce a drying which in turn is likely to produce a checking or warping which, in time destroys the insulation of the box that has been made for different conditions.

NEW DISTRIBUTORS FOR SERVEL AND ELECTROLUX

Servel Sales, Inc., announces the appointment of Buford Bros., Inc., 167 Second Ave. N., Nashville, Tenn., as distributors for the Electrolux and Servel refrigerators. Buford Bros., Inc., have been in the automotive and hardware supply business since 1873. Officers of the company are: Edw. Buford, Sr., president; Brown Buford, vice-president; Edw. Buford, Jr., vice-president; D. L. Scott, secretary-treasurer; and M. Y. Brockett, active sales manager.

A. Baldwin & Co., Inc., 1001 S. Peters St., New Orleans, La., will be distributors for Servel and Electrolux in that territory. The Baldwin company deals in wholesale, retail, hardware and mill supplies and operates over a wide section of the south. The following are the officers of the company: Phil M. Warren, president; J. H. Hitt, vice-president; C. A. Kepper, secretary-treasurer; and L. F. Murphy, sales manager. H. P. Schlade Co., Inc., 1329 North 15th St., Philadelphia, Pa., have recently been appointed as distributors of Electrolux. The Schlade company handles automobile specialties in addition to the refrigeration.

E. E. McCRAY MAKES GENEROUS GIFT FOR NEW KENDALLVILLE HOSPITAL

An imposing ceremony recently marked the opening of the New Lakeside Hospital at Kendallville, Ind., the erection of which was made possible by a gift of \$50,000 from Elmer E. McCray, president of the McCray Refrigerator Corp., and president of the Board of Governors of the hospital. The total cost of the institution is approximately \$110,000.

Three McCray refrigerators were installed in the hospital, one in the main kitchen and two in the diet kitchens. The entire equipment is cooled by equipment furnished by the Norge Corp., of Detroit, Mich.

NEW OFFICERS ELECTED BY N.E.L.A. FOR 1928-1929

The following officers were elected by the National Electric Light Association for the ensuing year:

President, P. S. Arkwright, Georgia Power Company, Atlanta, Ga.
First Vice-President, M. S. Sloan, Brooklyn Edison Co., Inc., Brooklyn, N. Y.
Second Vice-President, W. A. Jones, Henry L. Doherty & Co., New York, N. Y.
Third Vice-President, J. F. Owens, Oklahoma Gas & Electric Company, Oklahoma City, Okla.
Fourth Vice-President, A. W. Thompson, The United Gas Improvement Co., Philadelphia, Pa.
Managing Director, Paul S. Clapp, National Electric Light Assoc., New York.
Secretary, A. Jackson Marshall, National Electric Light Association, New York, N. Y.

ELECTRIC REFRIGERATION NEWS

The Business Newspaper of the Electric Refrigeration Industry

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F. M. COCKRELL, Editor and Publisher

H. A. DELASHMUTT, Advertising Manager BEULAH WERTZ, Circulation Manager
HUGH J. MOORE, Assistant Editor GEORGE N. CONGDON, Business Manager

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JUNE 20, 1928

Safety

THE subject of safety, like religion and politics, incites many people to extremes of opinion. Any condition of affairs, either real or fancied, which affects the present or future welfare of society is quite likely to provoke decidedly conflicting ideas as to what should be done about it. Self-preservation is said to be the first law of nature and it is difficult for the human mind to remain calm in the face of physical danger.

If the menace to society is of a mysterious character or of unknown proportions, it becomes far more terrifying than when its extent may be fully comprehended.

On the other hand when a hazard becomes well known it ceases to be a matter of concern. "Familiarity breeds contempt" of any kind of danger, hence the necessity for safety campaigns to inspire greater caution in avoiding risks in connection with so common an enemy to life and limb as the automobile.

Industry, in general, is devoting increased attention to safety measures for the protection of employees and the public. Any concern which fails to take reasonable precautions against accidents is deemed grossly negligent and the courts are inclined to inflict severe penalties upon those who so disregard the rights of others. Much hinges upon the word "reasonable" since absolute safety would usually involve a prohibitive cost. Herein lies the zone of argument. It is difficult indeed to determine what represents a reasonable degree of precaution and what cost figure becomes prohibitive.

There are those who argue that any device which may, perchance, cause the loss of a single life should not be permitted to exist. This extreme view, however, is not in accordance with the spirit which has actuated the American public in its search for better things. Mechanical progress has involved a certain degree of gambling instinct. The public is obviously willing to "take a chance" on anything which offers attractions. Recent accomplishments in the field of aviation are examples of the limits to which venturesome pioneers are willing to go to get a thrill or to advance a science.

Electric refrigeration equipment, combining as it does, a now familiar application of electricity with a less well-known application of chemistry, has not made its progress without an occasional accident. Such casualties as have occurred appear to be of minor importance when considered in the light of the development as a whole. Considered individually, a single accident is nothing short of a calamity. If repeated a sufficient number of times, the negligence or errors in judgment responsible for such accidents will invoke the penalty of loss of confidence in the industry.

It is generally recognized that continuous effort must be made to reduce such hazards to the minimum. There certainly can be no agreement with the proposition that the useful applications of electricity or chemistry be outlawed simply because an occasional error is made. From a practical standpoint the real solution becomes a matter of an intelligent personnel in the industry and an educated public using the equipment.

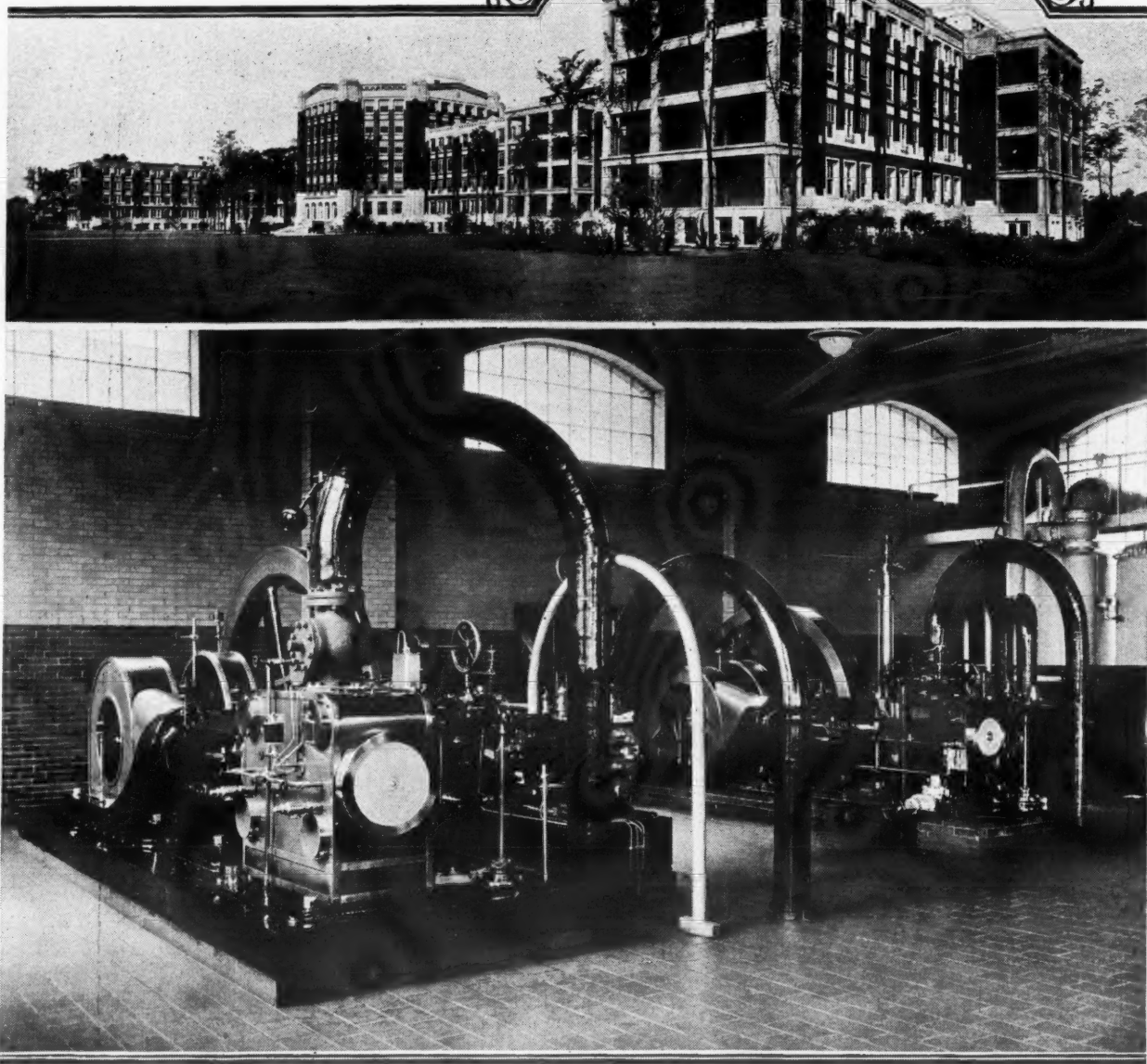
ELECTRIC REFRIGERATION NEWS takes the position that any serious accident due to failure of equipment on the premises of a customer is a matter of consequence to the entire industry. Every employee having to do with the installation or servicing of equipment is certainly entitled to full information regarding any risk which may be incurred in the handling of chemicals or other necessary parts of the apparatus. The public should be given warning regarding any element of danger involved in the event of the leakage. Any effort to avoid these responsibilities will only result in the establishment of control by outside agencies. Whenever such steps become necessary, the action is almost invariably of an unduly drastic nature. In protecting the public, the industry will protect itself against oppressive regulation.

Free discussion of the characteristics of the various chemicals used in refrigerating machines will do much to eliminate fear of these elements. In general, only small quantities of chemicals are used and, in the event of leaks, there is necessarily a considerable dilution before the gas is breathed. When the degree of danger which may be encountered with various gases under different conditions becomes a matter of common knowledge, the public will take the situation for granted.

A lesson may be taken from a campaign of education which is being carried on by the electric light and power companies throughout the country. Employees are being trained systematically in the correct methods of resuscitating people exposed to electric shock. Knowledge of the procedure has resulted in the saving of many lives. Safety campaigns carried on simultaneously have also been effective in teaching employees and the public to avoid exposure. Furthermore, the industry has welcomed all manner of safety devices and has given intensive study to the elimination of fire and casualty hazards.

Ford Hospital Requires Extensive Refrigeration System

World Famous Institution Equipped
By Brunswick-Kroeschell



The highly specialized refrigeration requirements of the Henry Ford Hospital, Detroit, whose grounds and buildings occupy an entire block, are provided by the Brunswick-Kroeschell carbonic anhydride system, a part of which is shown in the reproduction above. This equipment supplies refrigeration for diet kitchens, drug refrigerators, mortuary compartments and a variety of other cooling needs.

Questions Asked by Readers of the News

A Buyer for Cabinets, Compressors, Parts and Patterns

Query No. 105—An Iowa dealer in wiring, fixtures and radio accessories advises us as follows: "Wish to purchase compressors and all component parts, including five and seven and one-half food boxes. I wish to assemble in a small way my own items. Would buy castings complete units, or patterns."

Request Sample Operating Budget for a Distributor

Query No. 106—A young man in Dayton presents the following problem: "I am a subscriber to the News. Have gleaned a lot of information therefrom. I would like to have you publish in the News a sample budget plan as follows, covering—

- 1—Population total—500,000.
- 2—Out of this provincial is 200,000.
- 3—Radius in miles—80.
- 4—Operating budget.
- 5—Merchandise budget.
- 6—Sales budget.
- 7—Dealers set-up.
- 8—Advertising.
- 9—Service set-up.

"Conditions given are for normal economic situations regardless of industry. This answer might possibly show a suggested method of weighting to take care of either a larger or smaller population or a larger provincial territory."

In further explanation of the letter above, the following explanatory letter was received:

"The term 'provincial' was used to designate that portion of the territory outside the metropolitan area.

"The request regarding the 'merchandise budget' and the 'sales budget' relates more to the forecast for the ensuing year; the factors entering therein, and the basic items for estimating the increase or decrease during the period to be forecasted.

"My thought regarding a dealer set-up is to show a tentative plan for the minimum outlay necessary to have him properly operate as a re-sale agent in a territory with a population of 60,000. The distributor takes the responsibility of training dealers, salesmen and service organization under this plan.

"Following are suggested items for an operating budget:

Classification

1. Salaries.
2. Stationery and supplies.
3. Telegraph, telephone and postage.
4. Ordinary business expense.

5. Insurance.
6. Light, heat and power.
7. Rent.
8. Automobile expense.
9. Traveling.
10. Conventions and schools.
11. Special field adjustment.
12. Prize contests.
13. Miscellaneous expense.
14. Advertising.
- Direct mail.
- Co-operative newspaper advertising.
- Advertising literature.
- Posters and signs.
- Window display.
- Films and slides.
15. Merchandise purchases.
16. Service:
- Purchase of parts.
- Equipment.
- Salaries of repairmen.
- Shipping costs.
- Automobile expense.
- Total.
- Contingency.

"While I have no hesitancy in permitting you to publish the questions over my signature, yet because of the fact that as the industry goes I am unknown to it, being at the present time in a position somewhat near the bottom of the ladder, the use of my name might not therefore mean a great deal in connection with the publication of this article. I am very desirous of improving myself so that when an opportunity offers, I shall be able to take hold of a bigger job and handle it successfully."

How Many Manufacturers Quit During Past Five Years

Query No. 107—An electric refrigerator dealer in the state of Washington writes:

"We would appreciate the following information:

"(1) How many electric refrigerators are now on the market?

"(2) How many manufacturers discontinued manufacture during the past five years? Names if possible."

Why Does New York City Prohibit Multiple Installations

Query No. 108—The treasurer of a southern city has written to a manufacturer of electric refrigerators as follows: The letter has in turn been referred to ELECTRIC REFRIGERATION NEWS.

"It has been brought to my attention that there is a law in the City of New York prohibiting the installation of mechanical refrigerators on the multiple system. I understand that you are very fa-

miliar with why this law was passed and I am wondering if you would mind advising me just why such a law was passed."

Wants to Know Output of Leading Companies

Query No. 109—A prospective distributor seeks data as follows:

"For several years I was a distributor in the Kelvinator organization, and have recently been offered quite an attractive franchise by one of the leading manufacturers of electric refrigeration. Certain information relating to the industry in general is desirable in this venture, and this I thought you might be able to supply.

"First, I would like to secure a table showing the growth of electric refrigeration, from those early days when Kelvinator was the only manufacturer of any importance, to the present time, or as close as it is possible to secure information now.

"Second, yearly outputs of Frigidaire, General Electric, Copeland, and Kelvinator for 1925, 1926 and 1927, and if possible, for the first half of 1928.

"Third, what affect in your opinion will the introduction of Silica-Gel refrigeration have on the industry in general?

"And lastly, would you give me a statement regarding the future possibilities of the electric refrigeration business from the standpoint of the distributor? Also, any information, not definitely requested above, which might be helpful to a group of men in deciding whether or not a venture in this line of business would be wise at this time, would be appreciated.

"I would be grateful to you for supplying the information requested, at an early date, and am enclosing addressed envelope for your reply."

Desires to Distribute Gas Machine

Query No. 110—A western electrical dealer writes:

"We would like to have you give us the names of the manufacturers of natural gas absorption, commercial refrigerating systems, as we would like to get lined up as a distributor for same.

**Additional Requests for
Information on Page 12
of this Issue**

COLDK CORP. HELD RESPONSIBLE FOR DEFECTIVE MACHINE

Contractor and Building Owner
Also Held Liable

Judge Allyn L. Brown in the Superior Court handed down a judgment of \$19,000 against the Coldak Corp., New York, and the Home Heating and Refrigerating Co., Bridgeport, Conn., in favor of Mrs. Margaret Force Fromme and Mrs. Clara R. Force, of Danbury. The finding was for the death of Warren Force Fromme, 8 years old, and Frank Force, husband of Clara R. Force. The judge found the deaths to have been caused by poison gases from a defective refrigeration system.

The case is believed to be the first of its kind ever decided by any court in the country. It has been before the courts for more than a year, and the Coldak Corp. is held responsible in that it manufactured and placed on sale a refrigerating apparatus inherently dangerous to human life and health. The Home Heating and Refrigerating Co. was found negligent in installing a defective refrigerating plant, and the Paquique Realty & Securities Corp., Danbury, is blamed for not servicing and remedying the defective system.

Three suits were brought against the three companies, who must pay \$19,000 to the parties. Following is the decision in full:

"These three cases were tried together by agreement of counsel. The first is for damages for personal injuries sustained by the plaintiff October 14, 1926, through breathing of poisonous gases from an electric refrigerator located in a Danbury apartment house, caused by the alleged negligence of the defendants and the other two are for damages for deaths of her father and son, which occurred at the same time and place from the same cause.

"The defendant Realty corporation owned the building containing 32 apartments in one of which was known as No. 5D the catastrophe happened. The building was new and the owner had contracted with defendant Home company to install as a part of the equipment therein a so-called Coldak multiple electric refrigeration system consisting of two compressors located in the basement connected with an expander or refrigerating unit in each of the apartments.

"This system was designed by the predecessor of the defendant Coldak Corp., to whose rights and obligations it had succeeded, its mechanical parts were manufactured for it under its inspection and control, and the gas used in it as a refrigerant was covered by a patent giving it the exclusive right to dispense the same in this country.

"It furnished the compressors and expanders to the Home company for this installation at an agreed price, afforded it the advice and assistance of its engineers as to layout, etc., gave it explicit direction as to the use of the patented gas it designed to have used in the system and arranged for it to purchase the gas from authorized manufacturers thereof.

"The gas is comprised of 50 per cent ethyl chloride and 50 per cent methyl bromide by volume, is invisible non-irritating and has a very slight odor. It is an acutely accumulative, deadly poison, which when inhaled by a person, passes into the blood stream and attacks the central nervous system. It is an extremely dangerous substance and utterly improper for use as a domestic refrigerant.

"The potential hazard of its use for this purpose was greatly increased in this system as designed and installed, because in the event of a leak in any part of the system the entire contents would be automatically expelled through it into the apartment where the leak occurred.

"The hazard was further increased by the defective design of the expander installed in apartment No. 5D. The vertical bolts, one in each side of the unit, designed to hold the upper and lower parts of the casting together in a tight joint, were too short, so that but two threads were available for the top cap nut on the bolt at the left, instead of seven or eight as good and proper practice and construction required.

"Consequently this refrigerating system and the unit in apartment No. 5D, as designed, manufactured and marketed by the Coldak Corp., and as sold and installed by the Home company, was inherently dangerous to human life and health of which both defendant companies had constructive if not actual knowledge.

"Force's tenancy begun under a lease October 12, 1926, upon the arrival of Mrs. Force with their grandson from California, when all three took up their abode in the apartment with the full knowledge and consent of the Realty company.

"The lease provided that the tenant should use no other refrigeration service than that agreed to be provided by the landlord, that \$3 a month paid therefor should be deemed additional rent, that the landlord should have the right to enter and make repairs at any time, and that he should keep in repair a refrigerator adapted for use only in connection with the electric refrigeration.

"October 8, 1926, Culligan an employee of the defendant Home company, replaced the head on the expander in Apartment No. 5D, with a new one, in an effort to get rid of a leak in the unit, and in tightening the cap nuts on the side bolts, which were too short as above set forth, the consequent only two threads engaged in the left one were stripped. By reason thereof the top and bottom castings of the unit were not drawn tightly together and a large leak resulted in the vacuum side of the system. This condition persisted until after the accident happened October 14, 1926.

"After October 9, 1926, when they left it in operation, none of the defendant Home company employees were either present or did any work on the system, and the only one who did anything to it was the defendant Realty corporation, in whose sole actual control and possession it was during this period, acting through its janitor, Servin.

"While he had been shown how to throw off the compressor switch he did not understand the installation and had no knowledge or experience as to the repairs or operation of it, as his employer well knew.

"Since October 1, 1926, the defendant Realty company had been furnishing refrigeration for pay to a number of tenants in the building and had ordered Culligan to turn on everything on the top floor where apartment 5D was located, but knew on October 12 that there had been trouble with one unit and that the system was not working properly, and that it was shut down because out of order on that day.

"On the morning of October 13 Clara Force asked Miss Gerstemeier at the defendant Realty office in the building to have the refrigerator in apartment No. 5D fixed, which

At Atlantic City



W. Maples, E. O. Bodkin of McCord Radiator Co., and F. W. McMillan, also of McCord, on the boardwalk at the N. E. L. A. Convention.

she in reply indicated would soon be done. That same evening the system was again put on operation and the liquid refrigerant to upwards of some 50 pounds continued to escape into No. 5D through the leak in the defective expander up to the time that the compressor switch was thrown off by Servin on the morning of October 14, after the occupants had been discovered poisoned by the inhalation of the gas as they slept during the night.

"On the morning of October 14, there having been no contributory negligence on their part, the plaintiffs intestates died in convulsions as a result of the poison so inhaled and Clara Force became critically ill therefrom, was rendered temporarily insane, and suffered permanent injuries.

"Upon all the evidence establishing the facts above outlined among others, I find that all three defendants are liable in all three cases."

"BUSINESS IS EXCELLENT" SAYS COPELAND OFFICIAL AFTER EASTERN TRIP

Distributors Making Fine Progress

After an extended trip through the eastern half of the United States, W. D. McElhinny, vice-president in charge of sales for Copeland Products, Inc., Detroit, reports business excellent. "In every territory, he said, 'I found sales in a splendid condition. In most cases distributors were doing two and three times as much business this year as in the past. I found five sales organizations and distributors were adding to their retail sales force. One of the most impressive features was the improvement in showrooms and displays.'

Mentioning the new distributor at Pittsburgh, Mr. McElhinny said: "The McKean Company has built up a splendid dealer organization under the personal direction of Edgar D. McKean. The company has a fine show room, with an extremely large show window on Baum Boulevard, one of the main arteries from the residential to the business section in the heart of the East Liberty shopping district. Above the showroom is a mezzanine floor for offices and salesmen and above this is another floor with a stage for meeting purposes and containing the most comprehensive display of commercial refrigeration I have seen in the Copeland organization. Some idea of the size of this establishment can be gained from the fact that it was formerly the headquarters of the Ford distributor for Pittsburgh.

"The Copeland-St. Louis Company as an institution. Located on Locust Boulevard, this company has a frontage of at least 60 feet. W. L. Nickamp, its president, has arranged here the finest display of Copeland refrigerators I have ever seen. De Luxe models have been given special prominence. In the rear display room is space enough for two or three carloads of refrigerators. On the second floor is a completely equipped service department. In the front is a meeting room large enough to seat more than 100."

"Some idea of the progress made in Baltimore can be gained from the fact that the Baltimore-Copeland Refrigeration, Inc., sold 287 machines in April. It is interesting to note that there are five saleswomen in this organization. The lowest number of orders secured by any woman was five and the highest was 10. The company maintains an entire building on Charles Street, which is the best shopping street in Baltimore. There also is a fine schoolroom in connection with the salesroom and it is used every morning."

"In Cleveland B. W. Smith, Inc., has a fine showroom on Euclid avenue. In Cincinnati, the Fink Electric Refrigerating Company is making fine progress. It maintains a downtown showroom as well as an uptown one. We believe that the M. H. Moise Company at Lexington, Ky., is doing the best refrigeration business in the bluegrass region of Kentucky. They occupy the Moise Building, adjacent to the best hotel in the city.

"In Boston our distributor, Beaudette & Graham, has a fine store with a beautiful display on Boylston street. They have taken about two carloads a month and as they have been in the business only a short time we have every reason to believe that they will almost double this soon. They have secured some of the best house business placed in Boston this spring. In New York we had a sales

school at the Park Crescent Hotel which has 268 Copelands in its apartments.

"The Carlross Company at Memphis has sold a large number of De Luxe models. This company has a very fine display room with a large frontage and a big space for a service department. Down in New Orleans, Edward N. Eberling & Company is pushing sales of the higher priced models and placing many in the finest homes in the city. In Mobile the H. M. Price Hardware Company has a sales meeting room above its display room and I found a fine enthusiastic spirit.

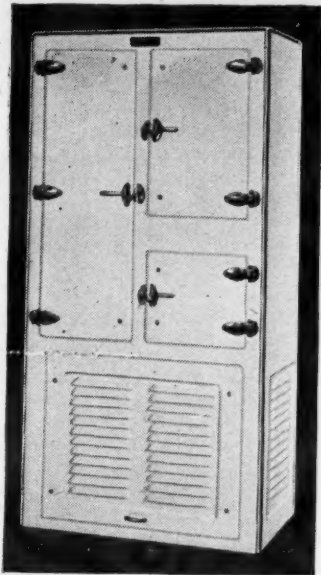
"At Atlanta I found the Sterchi Furniture & Carpet Company had opened a separate store in another building near its main store, while in Asheville, N. C. Sterchi Brothers are doing a splendid business. Shaws' Inc., at Charlotte, N. C. maintains a showroom and display that would be a credit to any organization. This company has secured a high-grade dealer organization and these dealers carry the confidence and good will of the purchasing public. In Norfolk, Copeland is well displayed by the Butt-Smith Corporation, and I found business in this territory was showing a big increase over last year."

NEW APPOINTMENTS BY THE WELSBACH COMPANY

The following concerns have been added to the sales organization of the Welsbach Co., Gloucester, N. J.:

The Electrical Advertising Corp., 16 Central St., Bangor, Me., has been named as a distributor. Charles F. Bruckner, 503 W. 26th St., Chicago, Ill., and the Glen Park Electric Shop, 3660 Broadway, Gary, Ind., have been appointed as display dealers. The Robinson-Butler Co., Henry and High Sts., Roanoke, Va., and Perrin Bros., Ashaway, R. I., are named as associate dealers.

BOHN'S Latest Achievement - The New BOHN "Super Quality" Refrigerator



Beautiful,
Distinctive

Can be had in 5,
6, 7, 9 and 12 cubic
foot net food
storage capacity.

White Porcelain
Enamel inside and
outside. The
machine compart-
ment is ideal for
storage space
where remote in-
stallation is made.

[Featuring the Insulated Baffle Wall]

The lowest prices in our 31 years of
manufacturing "Super Quality" Refrigerators

BOHN REFRIGERATOR COMPANY
SAINT PAUL, MINNESOTA

These models are on display at our own stores in

NEW YORK CHICAGO BOSTON
5 East 46th Street 227 No. Michigan Blvd. 707-709 Boylston Street



Our extensive Manufacturing
Department is manned
by TRAINED operators.

LEADERS IN SEAMLESS TUBING

Copper, Aluminum, Brass

In a few short years this company has won leadership in the field of small diameter seamless tubing and tubing products—random lengths, random length coils; soldering lugs, engine oil lines, heater units and other fabricated specialties. Over five acres of factory—operated with unprecedented efficiency.

WOLVERINE TUBE CO.

SEAMLESS COPPER BRASS & ALUMINUM

1415 Central Ave., Detroit, Michigan

Sales Offices: Cleveland; Chicago; Atlanta; Los Angeles; Denver; Rochester, N. Y.; Dayton, Ohio; New York City; Dallas, Texas.

Kelvinator Displayed in Modernistic Atmosphere By New Jersey Public Service at Newark



An Arctic sunrise effect produced by special floodlighting apparatus, together with the display of a Kelvinator cabinet and brine tank before an unusual background, combine to make up this interesting window display of the Public Service Electric & Gas Co., at Newark, N. J. The title card reads, "Let Kelvinator bring the dry cold of the Arctic into your modern kitchen."

W. E. WORRELL APPOINTED SALES MANAGER OF IROQUOIS

The Iroquois Electric Refrigeration Co., Philadelphia, announces the appointment of Walter F. Worrell, previously special representative for Iroquois in the Chicago territory, as manager of sales.

Mr. Worrell was formerly manager of sales for the Socony Burner Corp., a subsidiary of the Standard Oil of New York, and during his connection with Socony fourteen branches were established in New York and the New England States.

Mr. Worrell was at one time with T. M. Roberts' mail order house in Minneapolis, and later he became a member of the Gruenhagen & Francis Company, St. Paul, Minn. Subsequently he became associated with Marshall-Wells Company, Duluth, the largest wholesale hardware concern in the country, and remained in the employ of this company in various capacities for fifteen years.

UNIVERSITY OF PITTSBURGH TO OFFER COURSE IN REFRIGERATION

Commencing with the fall term, the Senior course in Machine Design at the University of Pittsburgh will include work in Mechanical Refrigeration. F. H. Stiening of the Department of Mechanical Engineering will be in charge of the work. Various types of domestic refrigerating units are now being assembled in the laboratories and will be used for instruction purposes.

SHOW STAGED BY ST. LOUIS UTILITY RESULTS IN 100 SALES

The Electric Refrigeration Show staged by the Union Electric Light and Power Co., St. Louis, Mo. recently was largely attended. Refrigerators representing nine of the leading manufacturers were on display on the sales floor in the Union Electric Building. More than 100 refrigerators were sold at the show by the exhibitors.

Church Circles View Electric Refrigerator Demonstrations

More than five hundred people in small Virginia towns saw the General Electric refrigerator demonstrated by the Old Dominion Power Company. R. G. Lockwood of the Lockwood-Embre Corporation, distributor at Roanoke, handled the demonstrations which were held in collaboration with local church circles. A prize was offered for every machine sold to the group before July 1st.

Woodwell Co., Pittsburgh, Named Electrolux Distributor

The Joseph Woodwell Co. at Second and Wood Sts., Pittsburgh, Pa., have been made distributors for Electrolux. The Woodwell is a very old established one, having been in business for 81 years—through four generations of the same family. They are wholesale distributors of hardware and auto supplies. Officers of the company are: W. E. Woodwell, president; J. D. Hailman, vice-president; John Woodwell, treasurer; J. K. Woodwell, secretary, and H. E. Webb, sales manager.

ST. LOUIS MEAT MARKETS 80 PERCENT EQUIPPED

The Union Electric Light and Power Co., St. Louis, Mo., reports that 80 per cent of the meat markets operating in Franklin County District have installed commercial electric refrigerators during the past two years. More than 90 per cent of the vegetable dealers are also equipped with electrical refrigeration.

SEVENTY-FIVE ATTEND MEETING IN DAVENPORT

Seventy-five men attended the recent dealers' meeting held by the Arnold-Ervin Co., General Electric refrigerator distributors in Davenport, Iowa, at the Hotel Blackhawk. Among this group were included a number of utility men from the Tri-Cities: Moline, Rock Island and Davenport.

Mr. A. T. Blackmore, chairman of the afternoon and evening session, introduced the General Electric officials, L. R. Edwards, advertising manager; C. E. Roesch, assistant manager; W. D. Trawick, of Schenectady, and D. E. Breckenridge, district representative of Chicago. E. W. C. Gierke, of the distributor company, welcomed those assembled and C. A. Nash, general sales manager of the United Light & Power Co., discussed the market possibilities.

French Liner Equipped

When the *Ile-de-France*, a French liner, sailed at midnight from the New York harbor recently, she was equipped with a Model R-5 General Electric Refrigerator. The Compagnie Generale Transatlantique, through the International General Electric Company arranged to have Rex Cole, Inc., New York distributor, place a unit aboard just before the ship sailed.

Woman, Leader in Sales Course, Closes Five Orders in Three Days

Mrs. Charles B. Reed, saleswoman for the Electric Refrigerator Company, distributors for General Electric at Spokane, Wash., recently sold five General Electric Refrigerators in three days. In addition to being a Class A saleswoman, Mrs. Reed is also a good student. She received a grade of 91.3 per cent in the Correspondence Sales School Course conducted by the General Electric Company.

Kentucky Man Makes High Grade In Sales Course

Inman L. McLean, associated with Inman and Inman, General Electric dealer at Louisville, succeeded in receiving one of the highest averages yet made by any salesman completing the Correspondence Sales School Course. Mr. McLean completed the course with a final grade of 96.8 per cent and received a "Recognition of Merit Card."

Holmes Products, Inc., to Manufacture Electric Refrigerators

The Holmes Products, Inc., Bridgeport, Conn., has leased a part of the plant of the Remington Arms Co. and will engage in the manufacture and distribution of electric refrigerators.

COPELAND CO. EARNINGS \$66,000 IN APRIL

April earnings of Copeland Products, Inc., Detroit, were \$66,336.52, making total earnings for the first four months of 1928 come to \$106,407.76—equivalent to \$1.05 per share of "A" stock after deductions for interest, depreciation and taxes, according to a statement by E. H. Brown, vice-president.

Application will be made to list both Copeland "A" and "B" stocks on the Detroit Exchange. The "A" stock is now dealt in on the New York Curb Exchange.

The Copeland Co. is starting an aggressive campaign on its commercial lines which include refrigeration for florists, meat markets, groceries, milk cooling plant, etc., also water coolers for factories and office buildings.

DETROIT FIRM BUYS 135 COOLERS FROM RICE PRODUCTS

The Buhl Land Company, Detroit, owners of the Buhl Building and other properties, has recently placed an order with Rice Products, Inc., 325 South Beaubien Street, Detroit, for 135 electrically refrigerated water coolers to be installed in the offices and suites of the Buhl Building.

H. C. Clappison, formerly connected with the Kelvinator sales organization is sales manager of the Rice company.

Opens in Orangeburg, S. C.

Gramling Electric Refrigeration, Inc., of Orangeburg, S. C., recently opened for business. Officers are Rueben C. Gramling and J. L. Gramling.

NEW INSTALLATIONS

The Longmont Hardware and Implement Co., Longmont, Colo., sold General Electric refrigerators to the following: Fletcher Brown, C. A. Gunning, V. S. Allen and F. A. Parker.

Copeland refrigerators are to be installed in every one of the fifty apartments of the Dobson House, 875 Seward Ave., Detroit.

Alfred A. Grezel, Manchester, Mass., installed a Frigidaire cooler in the Manchester Trust Co. building recently.

Walter Biehle, proprietor of the Perryville Radio and Electric Co., recently installed Frigidaire for Dr. W. H. Bailey and Dr. G. H. Bredall, of Perryville.

Clarence Winters, Frigidaire dealer in Bristol, Pa., has installed refrigerating equipment in Siebold's meat market and delicatessen. Ellwood Dyer, Bristol milk dealer, has also purchased Frigidaire equipment from Mr. Winters.

Sixty-three Kelvinators have recently been installed in the new Hanscom Apartment, Omaha, Neb., by the Kelvinator Department of the Nebraska Power Co.

A contract for installation of Kelvinator equipment in the new Lincoln Junior High School, Dayton, Ohio, has been awarded the C.L. Radio Co., South Jefferson St., Dayton.

Reese and Amster, Jerome, Ariz., have recently completed the installation of a complete Kelvinator cooling plant at the Verde District Dairy. This equipment provides for the cooling of milk to a temperature of 40 degrees.

St. Joseph's Hospital in Omaha, Neb., has fourteen large model P-12 and two R-7 model General Electric refrigerators recently installed by the Storz Western Auto Supply Co.

The Dunson Hospital at Lagrange, Georgia, has been equipped with one large PL-17 and two P-42 model General Electrics. The installation was arranged by the Electrical Appliance Co., at Lagrange, dealers of the Alexander-Seewald Co.

The State Capitol and the Governor's mansion at Austin, Tex., each have two General Electric refrigerators installed.

Electric refrigeration will be in every apartment of the 109 States Avenue Apartment just completed in Atlantic City, N. J., by Louis Shaffer. The structure is a modified form of English architecture, of semi-fireproof construction and costs approximately \$250,000.

Local Representatives Wanted in Every City

Local News Correspondents and Subscription Salesmen Desired by Electric Refrigeration News

REFRIGERATION is destined to become recognized as a basic industry. Past production and sales of machines have supplied only a fraction of the total market. Many new applications of refrigeration for home and industry are being developed. The business is growing at a rapid rate. New manufacturers are entering the field. New dealers are becoming a part of the distributing organization. Thousands of men and women, previously engaged in other activities, are joining this new industry. In brief, refrigeration represents one of the modern advancements in the standard of living and the industrial expansion of America.

ELECTRIC REFRIGERATION NEWS will keep pace with this development, supplying a needed service to the individuals and companies whose interests are bound up with the industry. As announced in the first issue, which appeared less than two years ago, the NEWS aims:

To encourage the development of the art.

To promote ethical practices in the business.

To foster friendly relations throughout the industry.

To provide a clearing house for new methods and ideas.

To broadcast the technical, commercial and personal news of the field.

As a part of a new program of expansion, the NEWS will appoint local representatives in every city to act as news correspondents and subscription salesmen. Such representatives must be selected carefully in order to insure complete reliability of reports and satisfactory handling of subscriptions.

The work, of course, will consume only a small amount of time in most communities and the compensation will simply be so much extra money for the effort expended.

Individuals now connected with some branch of electric refrigeration are preferred. The connection with ELECTRIC REFRIGERATION NEWS will offer an opportunity to expand local acquaintanceship and to keep in touch with the leading business men of the industry. If you are interested write for further information regarding the plan.

Electric Refrigeration News,
554 Maccabees Building,
Detroit, Michigan.



Mississippi Power Salesmen Find Satisfied Owners Are Their Biggest Selling Help

Regular Calls on Owners Create Good Will and
Bring to Light Many New Prospects

By Archie Richardson

"SELLING electric refrigerators in a small city is largely a matter of giving every buyer everything she expects and a little more, and keeping her satisfied," said W. L. Bowdoin, sales supervisor of the Mississippi Power Co., Meridian, Miss.

"Each refrigerator we sell is installed by a man who knows his business and who makes sure that the installation is right. Then about ten days later the man who made the sale goes back, looks over the installation and finds out whether or not the buyer is completely satisfied, and if not, why not. Often he finds that she is not making full use of the facilities of the machine because something has not been made clear to her. The salesman can often make suggestions that will enable her to get service she did not know her refrigerator afforded. This call, and subsequent ones, are well worth the time they take and enable our salesmen to enlist the aid of their customers in selling to friends and neighbors."

Each salesman of this company makes it a practice to do as many goods turns every day for as many people as possible and therein lies the story of the unusually good job done by this company in putting electric refrigerators on its lines.

Salesmen Handle Minor Service Problems

The usual plan of the salesman, when not engaged in a sales campaign or other specific work, is to ring door bells and ask the housewives if there is anything wrong with their electric irons, lights or anything else that has to do with the electric service. Where there is some difficulty, he seeks the trouble and remedies it himself if it is a small one or calls on one of his company's service men if the service of an expert is needed. But he sees to it that the customer gets what she needs, and that his company gives her as nearly one hundred per cent service as possible.

And while in the house discussing the matter of the customer's electrical service, he takes occasion to ask her if she has seen one of the new electric refrigerators and what she thinks of it. If she displays interest, he mentions a few of the good points of the machine or perhaps that Mrs. Jones, a neighbor who has recently bought, says she doesn't know how she ever managed to keep house without one. In the end he suggests that whether or not she has any idea of getting one herself, it would be well worth her time to drop by the store and look over the display. If possible he makes an appointment for her to call.

After leaving, he classifies her as a prospect for an electric refrigerator, and keeps her in mind against the time when his company puts on an electric refrigerator campaign or until other circumstances lead him to believe that he might be able to sell her.

The company's salesmen, each of whom has a third of the city as his territory, are constantly canvassing for prospects

for refrigerators and other electrical appliances. Whenever they go into a home, to follow up a sale or to find out if any of the electrical equipment is giving trouble, or for other cause, they never leave without at least an effort to learn of something else electrical that is needed or the name of some friend of the customer to whom some appliance might be sold.

No Time Wasted in Hunting Prospects

Then, when an electric refrigerator sales campaign is launched the salesman has only to sort out his cards of refrigerator prospects, and go after them. By previous calls he knows practically every person in his territory who is likely to be in the market, and no time is wasted in hunting prospects. Having personally discussed electric refrigeration with them, he knows something of the extent of the interest of each, the size of the family, the kind of refrigerator in use, and their ability to buy. He can thus classify his prospects according to the probability of selling them, giving his first and best efforts to the best prospects and saving the poorer ones for the last, to be followed up, if he has the opportunity, before the campaign comes to a close.

In addition to the usual methods of advertising the article to be featured in the campaign—newspaper space before and throughout the campaign, direct mail advertising, and the like—this company has a plan of its own which has been used for several years and which has been found highly effective.

Several days before the opening, two boys of good appearance start out and, visiting the home of every domestic customer, hand a piece of advertising matter to the housewife. The boys are instructed to ring the door bells and as far as possible put the copy into the hands of the housewife; leaving it under the door or entrusting it to someone else only where the housewife cannot be seen.

Under this plan, it has been found, almost every woman knows that a salesman from the company will shortly call on her and if she is at all interested in the appliance offered she reads the folder handed her. It has in various campaigns been found that a very large portion of these folders were carefully read and that the prospect knew in advance more about the appliance that the salesman could have told her in a brief interview.

Servel Distributor in Florida Appoints Sales Director

The Southern States Sales Corp., 717 Times Bldg., St. Petersburg, Fla., has announced the appointment of A. B. Lambert of that city as director of the sales department handling Servel electric and gas refrigerators. Mr. Lambert was formerly associated with the Florida Power Corp. and has a wide experience in handling Servel products. The Southern Sales Corp., is distributor for the state of Florida and their organization comprises of sixty dealers throughout the state.

Richmond, Va., Dealer Moves

Dallas A. Shafer, who will conduct the Richmond, Va., agency for General Electric refrigerators, announces the removal of offices on Sixth St. to 316 East Grace St. Mr. Shafer has leased his new place for five years and it will provide large and more convenient quarters.

A Lacquer Finish That Has Stood the Test



M & W White Refrigerator Lacquer Enamel has been adopted for the following

Reasons

- No. 1—**BEAUTY OF FINISH.** It resembles Porcelain in color and lustre.
- No. 2—**APPLICATION DIFFICULTIES** are minimized.
- No. 3—**TOUGHNESS and DURABILITY.**
- No. 4—**EASE** of cleaning after assembly.
- No. 5—Does not **CHIP** where drilling is necessary.
- No. 6—Has been built upon many years of **EXPERIENCE** and Research in the Manufacture of Lacquers and Enamels for finishing Metal and Wood.
- No. 7—Has been proven in actual large volume **PRODUCTION** and has withstood the most severe and critical tests.

Spray two coats over M & W Lacquer Primer or M & W Oil Base Primer to produce a **LASTING, BEAUTIFUL FINISH.**

Available in any required color.

MAAS & WALDSTEIN CO. METAL & WOOD LACQUERS AND ENAMELS

EXECUTIVE OFFICES AND PLANT, 438 RIVERSIDE

AVENUE, NEWARK, N. J.

CHICAGO OFFICE
AND WAREHOUSE
1115 Washington Blvd. West

LOS ANGELES OFFICE
AND WAREHOUSE
1212 Venice Blvd., Los Angeles, Cal.

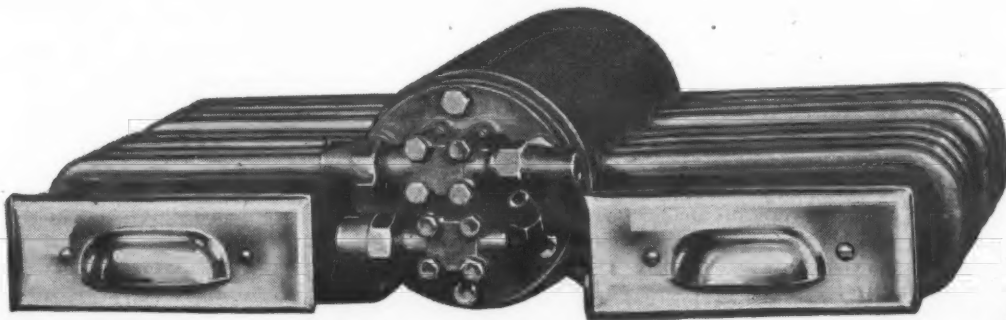
FEDDERS STANDARD APPLIANCES

BRINE TANKS
CONDENSERS
EXPANSION
VALVES
FLOAT
EVAPORATORS
EVAPORATOR
HANGERS

ICE TRAYS
SCALE TRAPS
LIQUID
FILTERS
LIQUID
RECEIVERS
SUCTION
SCREENS

GOODWILL ~ CONFIDENCE ~ FRIENDLY RELATIONS

The FEDDERS ORGANIZATION carries these attributes of a successful business always in mind. Our success depends on your success and while appreciating the splendid business given us in the past, we will strive to merit your continued approval by installing greatly increased production facilities and an engineering personnel. The Fedders Standard Appliances are dependable and are backed by a financially responsible and well organized Corporation which is keenly alive to its responsibility to the small machine industry.



AIRWAY CONDENSERS

Making condensers and radiators has been our business for more than thirty years.

We will be glad to cooperate with your own Engineering staff in suggestions of a constructive nature to improve, if possible, the operating efficiency of your unit.

SEND FOR SALES BULLETINS

FLOAT EVAPORATORS

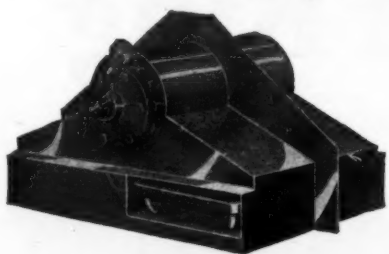
The Fedders line of float controlled evaporators, or boilers, is unsurpassed in appearance, or inherent quality of workmanship and materials. A greatly increased line of domestic boilers is ready for the market.

**FEDDERS
MFG. CO.**

Buffalo, N. Y.

F. B. RILEY
Factory Representative
320 Beaubien St., DETROIT, MICH.

Another Electro-Kold achievement in economy for apartments



THIS single small unit handles two boxes back to back, each 2½ cubic feet, in apartments just building. Each box need not be more than 12" deep outside! 18 cubes to a side. The price? You'll be surprised. Write or wire for further details regarding dealer franchise. The Electro-Kold Corporation, Spokane, Wash., U.S.A.

ELECTRO-KOLD

Since 1922—The Simplest Electric Refrigerator.

Growth of Electric Refrigeration Stimulates Improvements in Porcelain Enameling Methods

Development of Continuous Furnace Adds to Efficiency and Reduces Cost of Operation

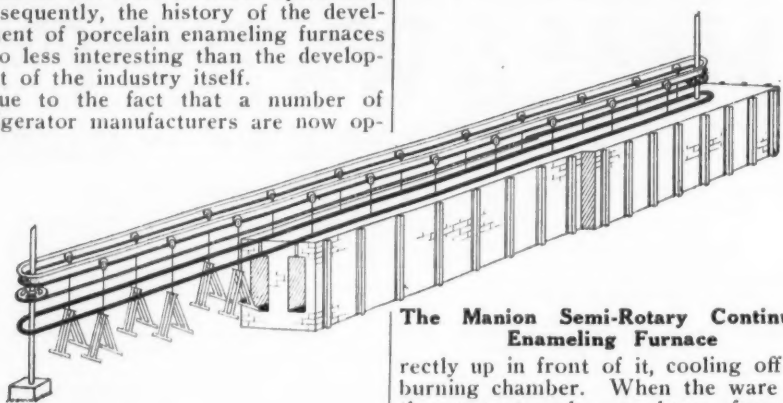
THE widespread use of porcelain enamel by the refrigerator industry has given a tremendous impetus to the general use of this finish and to the growth of the porcelain enameling industry. It may be interesting to know that porcelain enameling, although a very old art, is a comparatively new phase of industry in this country.

That it is the ideal finish for refrigerators, as well as stoves, kitchen utensils, bathroom fixtures, and other home appliances, is indicated by its qualities. It is hard, brilliant, sanitary, rust-proof, and wear-proof. The material is really liquified glass, which has been treated with opacifying material and then fused onto iron or steel at temperatures ranging from 1,300 to 1,600 degrees Fahrenheit.

From this very brief description, it can easily be seen that the burning process is one of the most important in porcelain enameling. It is, and, in fact, is one of the most intricate operations. Consequently, the history of the development of porcelain enameling furnaces is no less interesting than the development of the industry itself.

Due to the fact that a number of refrigerator manufacturers are now op-

"The box type or square enameling furnace, which is familiar to us all, loses heat in several different ways. In the case of fuel fired furnaces, much of the heat is lost through the stack. In the case of any box type furnace a large proportion of the heat is lost through the door. When the door is open a rush of hot air immediately starts. Cold air comes in at the bottom of the door opening over the hearth and hot air passes by the bottom of the door di-



The Manion Semi-Rotary Continuous Enameling Furnace

erating large porcelain enameling departments in connection with their factories, readers will be interested in the latest improvement as regards enamel furnaces. The single end, semi-rotary continuous furnace is described in the following article by H. L. Brooks, which appeared in a recent issue of the Enamelist.

The Semi-Rotary Principle

"Some very interesting figures have been lately unearthed, in connection with continuous enameling. After taking readings on the fuel consumption of a Manion semi-rotary continuous furnace, it was found that the efficiency was much higher than had been expected. After investigation, a few interesting facts were brought to light, which show a new application of an old principle.

"Let us take, for example, a continuous enameling furnace where the ware passes through, hanging on an overhead chain, with suitable seal between the chain and the hot chamber to prevent the loss of heat through the top of the furnace. If, for example, the ware hanging on the chain goes into the furnace through a slot in one end, passing through a chamber towards the hot part of the furnace, the temperature of the ware is gradually increased, until it reaches the burning temperature. The ware then turns 180 degrees in the hot part of the furnace, and returns toward the same end through which it started, parallel to a new line of work coming in. If the temperature of the ware coming out of a slot, a short distance from the one through which it entered, has decreased to room temperature, having radiated all of its heat into the entering ware, the only heat required for maintaining the enameling temperature in this furnace is that lost through the furnace walls and through the top. If, for example, this furnace were perfectly insulated, and the furnace temperature brought up to the enameling temperature, the fuel could be shut off and ware passed through and burned continuously forever without the application of any additional heating medium.

"That is not a form of perpetual motion, but in accord with true scientific principles. The fallacy, of course, is that a perfectly insulated furnace cannot be obtained, and the ware as it comes out of the furnace has a higher temperature than that going in.

"The semi-rotary furnace, however, apparently approaches this ideal condition. Let us consider several types of enameling furnaces for example:

rectly up in front of it, cooling off the burning chamber. When the ware and the support racks are drawn from the furnace, they immediately start to cool. The ware, of course, eventually cools down to room temperature, losing its total amount of heat absorbed in the furnace, and the racks before being replaced in the furnace, lose many hundred degrees of heat. Regardless of the amount of insulation around the furnace, a certain quantity of heat is conducted through the walls and through the bottom of same.

"In a continuous furnace where the ware passes from one end through the furnace and out the other end, a gentle flow of air is created by the work passing through the furnace in the direction of the travel. The ratio of radiation losses is directly proportional to the exterior surface of the furnace. This is a constant factor for any given furnace. If, for example, 150 lineal feet of chain are required for the drying, burning, and cooling of the ware, the furnace with its drying and cooling chambers must be 150 feet long. If, for example, the furnace is 7 feet high, 7 feet wide, outside dimensions, the radiation surface is 4,298 square feet including the two sides, top and bottom and two ends.

"It is necessary to have a crew at one end of the furnace to load same, and another crew at the other end of the furnace to unload. If the chain is returned outside of the furnace, almost all of the heat absorbed in the racks supporting the ware is dissipated before they are reheated.

"The semi-rotary furnace is the latest development in the continuous furnace field. The furnace may be so located that the front end is flush with the wall of the building, the furnace itself being built out of doors, and protected only by a corrugated iron shed. The chain can be extended from the front of the furnace into the building as far as necessary to accommodate sprayers and dippers and unloaders passing around a sprocket at the end of this line.

"The lineal length of the chain inside of the furnace is 130 feet and the total length of the furnace from front to back is 67 feet overall. The air flow started by the ware passing around into the furnace and out again is baffled, so that air currents are set up, deflecting the heat from the ware coming out toward the ware entering. No flow of air could be detected, leaving the furnace through the slot out of which the hot ware emerges. A furnace of this nature having 130 lineal feet of chain in the furnace at one time is 7 feet high, 8 feet wide, and has a surface area of 1918 square feet counting the sides, top, bottom, and two ends.

"The fuel consumption of this fur-

nace, producing 3,000 square feet of ware per hour, the ware being 20 and 18 gauge mixed, is 25½ gallons. The heating efficiency of this furnace is several times that of a box type. In one plant this furnace has replaced 8 box type furnaces. The saving is figured in labor and fuel alone, at about \$400.00 per day. "These furnaces can be constructed in various sizes, depending upon the production requirements. The method of construction permits elasticity of output and a low installation cost."

Seven New G. E. Dealers Appointed for Missouri Towns

The Hurlburt Supply Co., Springfield, Mo., announces the appointment of the following companies to act as local General Electric refrigerator dealers in Missouri towns: Caldwell & Sons, Lockwood; Aid Hardware Co., West Plains; Rhode Hardware, Seymour; Hessler Electric Co., Neosho; Justin Carlock, Greenville; Richland Hardware Co., Richland; Mansfield Furniture Co., Mansfield.

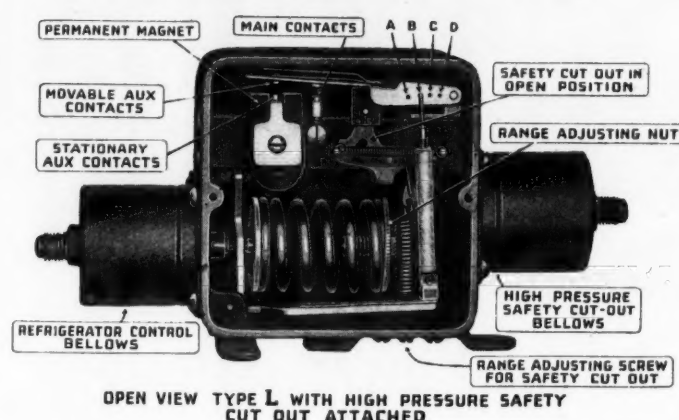
Refrigerator as Prize in Bake-a-Cake Contest

To the winner of third prize in the Portland Telegram-Portland theatre Bake-a-Cake sweepstakes, will be presented one of the latest models of Electro-Kold refrigerators. The contest was open to all amateur cooks in the city and started June 16, running till June 23. Electro-Kold corporation were the donors of the prize.

Robert E. Manley Joins Chicago Office of Welsbach Co.

Robert E. Manley, formerly of the Hurley Machine Co., has recently joined the Chicago office of the Welsbach Co. He will have charge of that company's electric refrigeration sales in the territory immediately west of Chicago.

NEW PENN COMBINATION CONTROL and SAFETY SWITCH for REFRIGERATIVE UNITS



The Penn Electric Switch Co. now offers their regular Type L Magnet switch, provided with a high pressure safety cut-out, in addition to the regular temperature or pressure controlling mechanism, all in one compact unit. (See Cut.) The high pressure diaphragm is to be connected to the discharge side of the refrigeration system. In case an excess pressure is built up, due to any cause whatsoever, the safety feature opens the switch and stops the unit. When normal pressure has again been restored, this feature will permit the switch to close and the unit will continue to operate.

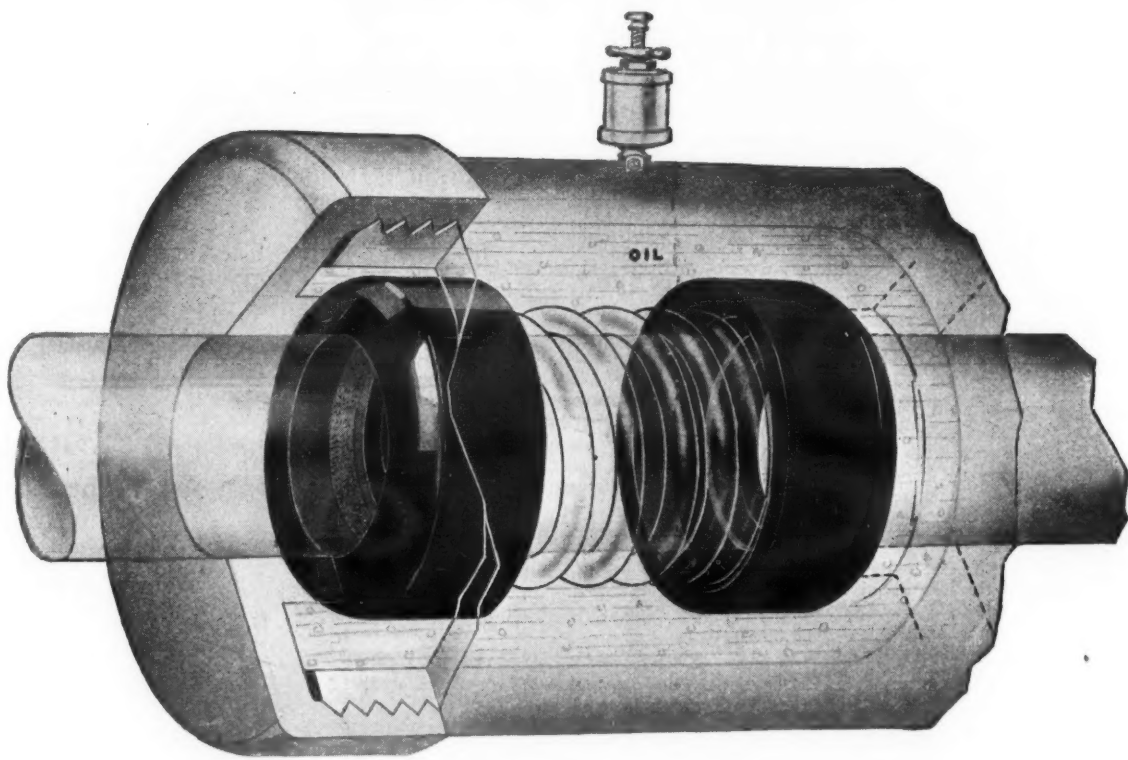
The operation of the high pressure safety element and controlling mechanism are entirely independent and in no way affect each other.

This combination control and high pressure safety switch can be furnished for pressure or temperature controlled systems using any of the usual refrigerants—excepting ammonia.

We solicit inquiries from manufacturers and others interested in such a control.

PENN ELECTRIC SWITCH CO., Des Moines, Iowa

They please your dealer and his customer —how about you?



WHAT'S the most usual source of trouble? Leakage! Leakage in compressor or pump, leakage in the packing box, leakage around a rotating shaft.

Forty per cent of dealer's servicing comes about through repairs to prevent leakage.

Yet this one simple, inexpensive addition to your machine can and will eliminate leaks forever.

The Cooke Seal Ring maintains a leakless pressure or holds a deep vacuum on any revolving shaft; it gives a perfect seal and holds a wide range of volatile gases, oil and air; it reduces motor load by

eliminating 90 per cent of friction caused by ordinary packing.

It is composed of four simple parts. It is bound leak-proof and frictionally tight on the shaft and rotates with it instead of pressing against it—a ground joint with only 1/8-inch bearing surface against the gland. Requires no service whatever.

If you are not already using Cooke Seal Rings on your machines it will pay you to send for further details regarding sizes, types, prices and complete data as outlined in our booklet—yours for the asking.

Mail the Coupon Today!

COOKE Seal Ring

20 NORTH GREEN STREET, Dept. D, CHICAGO, ILLINOIS

COOKE SEAL RING, 20 North Green St., Chicago
Please send me your FREE booklet without obligation.

Name.....
Address.....
City..... State.....



Send for this book

EXTRA DRY ESOTOO

THE PUREST
SULPHUR DIOXIDE

Analysis Guaranteed

We have an agent, with our product in stock, near you
Wire us where we can serve you

VIRGINIA SMELTING CO., WEST NORFOLK, VA.
F. A. EUSTIS, Secretary 131 STATE ST., BOSTON 2 Rector St., NEW YORK

Should Salesmen Be Hired On Salary Or Commission?

A Record of 62 Men Over Three Year Period Shows Salary Plan Most Satisfactory

By Frank W. Gray, Sales Manager
Rocky Mountain Radio Corp., Denver, Colo.

THE problem which confronts the sales manager in building an organization for re-sale of electrical refrigeration products is to keep the overhead of his business in correct proportion to the gross sales. If this is done the profit will take care of itself. Therefore the problem resolves itself down into obtaining the best results with the least expenditure of money.

During the last three years the writer, who has been engaged in the management of an electric refrigeration department, has had a labor turn-over of about sixty-two men. He has kept a note book with the results obtained with each of these men—that is, the profit or loss on each man's efforts. And he has found that he has lost on the commission men and has made profit with the salaried men.

It may seem queer to some executives how a loss can result from the efforts of men who are drawing no remuneration other than results directly from their commissions on sales. But if one takes into consideration the educational effort required to put commission men on a paying basis, coupled with the constant labor turn-over which the hiring of commission men involves, he will see the matter in a different light.

A Man Is an Investment

A sales representative is just as much of an investment for his house as an advertisement in a newspaper. Certain types of sales work can be handled by indifferent help, particularly where the sale is of a simple nature and depends upon "pavement pounding" rather than head work. The writer has come to the conclusion that poor investments in men do not pay in a business which is as specialized and as difficult to handle as electric refrigeration.

The average commission man is either starting in business or fading out of it. If he is starting in, he is apt to be young, unseasoned, and constantly on the lookout for a better job than he has. The chances are that this type of man is apt to be unreliable and impossible to depend upon for consistent effort. The man who is fading out of business is apt to be older, and very likely has a life of ineffectual effort behind him.

It Costs Just as Much to Train a Commission Man

The sales manager must spend just as much time with the commission man as with the salaried man. He must supply him with sales equipment, follow him up constantly to see that he is on the job, check very carefully his credits, and constantly spur him along to effectual work. Commission men are seldom loyal to the house they work for, in the beginning at least, and are generally to blame for most of the poor credit risks that come into the office.

Electric refrigeration is essentially specialized selling, particularly in the commercial and apartment house fields. A good salesman must know how to analyze the problem of his prospect, must know what he is talking about in specifying equipment, in other words, must be responsible in every way. He must also protect his house as much as possible on the credit of his customers. It takes about two months to develop a good refrigeration salesman, who can handle all phases of the work moderately well. It takes considerably longer than that to develop an expert salesman who can be relied upon to figure his own deals and pioneer his own business. Commission men seldom last that long.

Let's get down to figures. Twenty-eight of the sixty-two commission men

hired by the writer in the last three years lasted with the organization less than forty-five days. In many cases they quit without notice, and often were just at the point of becoming valuable to the organization and to themselves when they did quit. Nineteen of the sixty-two men lasted about three months in the work. And the rest, with the exception of one man who is at present with the organization, left at intervals less than six months.

Salary Men Were Picked More Carefully

Now let's look over the salaried men. About ten men have been started on a salary during this period. Out of this number four were fired, and six are still with the organization and have proved to be go-getters. The reason why these men have brought in results is that they were picked carefully to begin with and more careful supervision was exercised over them than is possible with the average commission men. Consequently the writer finds that he can do about the same volume of business with four well-selected salaried men as with ten discontented, spasmodic working commission men.

Several other electric refrigeration organizations with which the writer is acquainted, have had practically the same experience. A happy medium between salary and commission may be arrived at by allowing drawing account and commission. This is the basis on which most of the more successful organizations work. For in the case of salary and commission the man has a regular source of income which makes him more self respecting and loyal to his house, and at the same time has the incentive to work which is the aim of straight commission employment.

A few discontented "losers" are a detriment to any organization—a source of trouble and ferment from the time they are hired. If a man is worth anything to a sales organization as a sales investment, he is worth paying for his time, particularly where the work calls for the poise and brains which characterize the good refrigeration salesman. The writer believes that if more electric refrigeration sales managers would think a little less of the initial expenditure in man power, and look to the perfection of an organization for the future, they would find an economy in discarding the straight commission man.

Springfield, Mass., Copeland Distributor Celebrates Opening of New Quarters

Charles Rice, Inc., Springfield, Mass., Copeland distributor for central Massachusetts, announced its new headquarters with a gala opening, May 23, 24 and 25. Mabel E. Markle, of the Fannie Farmer School of Cookery, Boston, assisted in the opening with special lectures and demonstrations of the Copeland electric refrigerator. The Charles Rice, Inc., suffered the loss of its quarters only about a month ago by fire. Temporary quarters were obtained and business resumed in less than three days. Work was started at once on the new home and rushed through to completion.

Refrigeration Display at Auto Show Proves Good Investment



Two Sales were made and forty-two prospects obtained by the Mifflinburg Hardware Co., Mifflinburg, Pa., from this Kelvinator display at an automobile show held in Milton, Pa.

FRIGIDAIRE BRANCH MEN AND DISTRIBUTORS CONVENE AT DAYTON

Twenty-five distributors, thirty branch managers and one hundred district sales managers coming from all parts of the United States, and ten Canadian representatives were in attendance at the semi-annual Frigidaire distributors and branch managers convention held at the Engineers' Club, Dayton, Ohio, June 14 to 16.

E. G. Biechler, president of Frigidaire Corp., told those in attendance that Frigidaire ice cream cabinet business in May was the biggest in history, showing a 30 per cent increase over June, 1926, the previous best month in this particular field.

Shipments of household refrigeration cabinets for the year to date have been 23.2 per cent ahead of the same period in 1927. Apartment house business is showing a 30 per cent increase, he said. Cabinet shipments abroad have been 90 per cent ahead of the first five months of last year and shipments of compressors and cooling coils have likewise shown a tremendous increase.

Two new branch managers were introduced, R. H. Graham of Baltimore and H. J. Walker, Jr., of Dayton, both of whom have been placed in charge of Frigidaire sales branches during the past month. Clark Walter, distributor for Cuba and L. R. Wood, distributor for Spain were among field representatives coming from a distance.

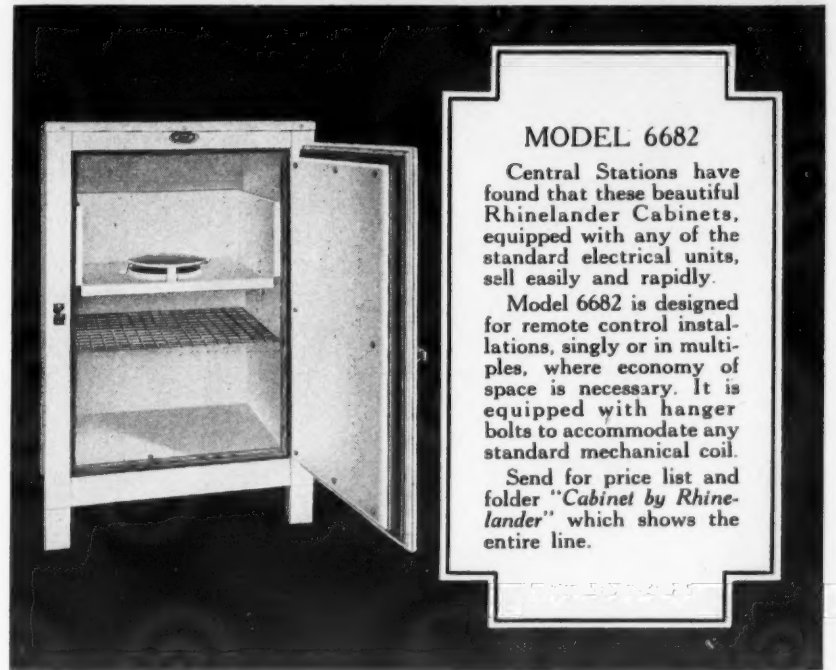
New Illinois Dealer for Welsbach

Welsbach low pressure electric refrigerators will be distributed in territory comprising Villa Park, Elmhurst, and Lombard, Illinois, by the Villa Park Electric Shop. J. E. Britt, head of the service department, will be in charge of the refrigerator sales.

Central Stations Are Selling

RHINELANDER  REFRIGERATORS

Equipped with any Standard Electrical Unit



MODEL 6682

Central Stations have found that these beautiful Rhineland Cabinets, equipped with any of the standard electrical units, sell easily and rapidly.

Model 6682 is designed for remote control installations, singly or in multiples, where economy of space is necessary. It is equipped with hanger bolts to accommodate any standard mechanical coil.

Send for price list and folder "Cabinet by Rhineland" which shows the entire line.

RHINELANDER REFRIGERATOR CO.
RHINELANDER, WISCONSIN

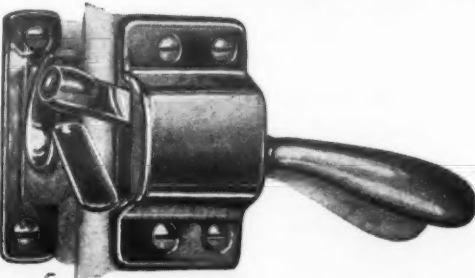
Please send your folder "Cabinet by Rhineland," and Price List.

NAME _____
ADDRESS _____
CITY _____ STATE _____

Here's ONE key to sales resistance



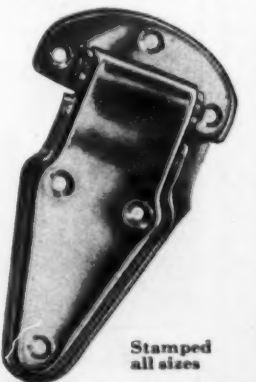
Women like
good-looking
dependable
hardware



This patented automatic latch is the most simple reversible automatic ever devised. Spring and bolt action guaranteed positive and non-breakable.

Why not let this organization work with you on your hardware problems? Our plant is organized to give you the last word in service and ideas. Inquiries from manufacturers get real action. Write!

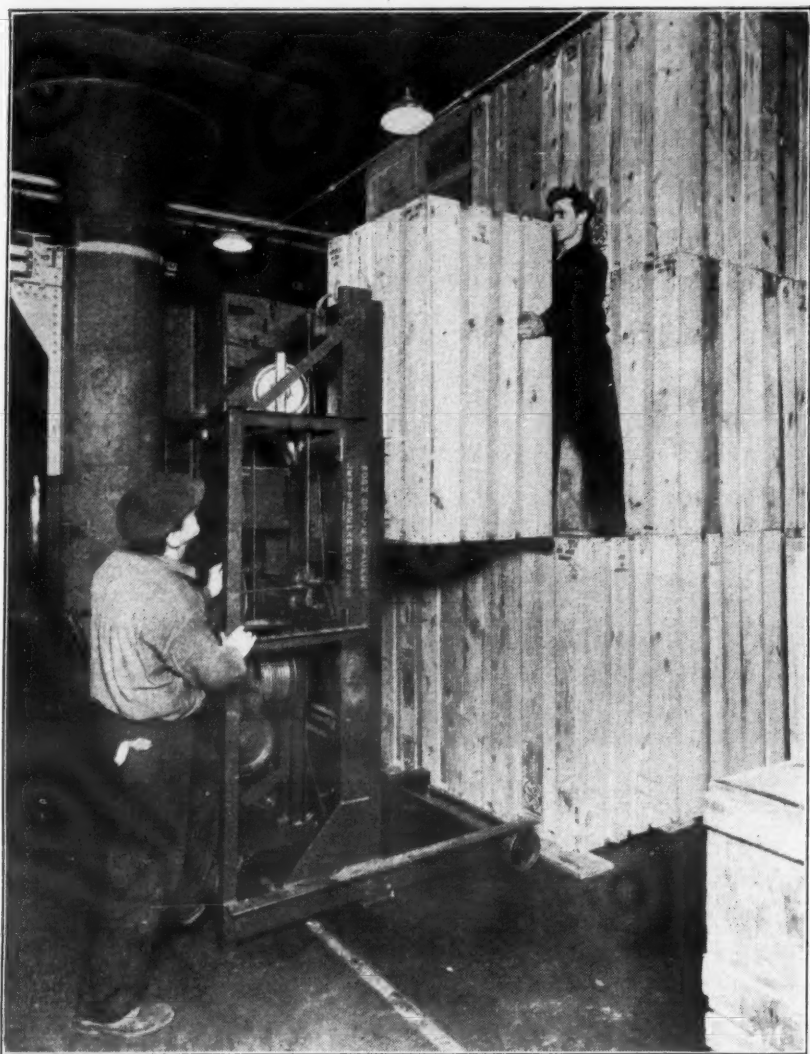
GRAND RAPIDS
BRASS CO.
GRAND RAPIDS, MICH.



Stamped all sizes

And here is hardware that combines good looks with sturdy, life-long dependability! Remember this—hardware is seen... it helps make first impressions. Good latches and hinges, built to Grand Rapids Brass standards, make a lasting impression on the eventual purchaser of beauty and satisfactory service. To manufacturers, we offer more than 300 patterns... some plain, others decorative. All are beautifully finished in heavy nickel, genuine chrome plate, Butler silver, satin silver, or other special effects. Prices are right.

Time-Saving Equipment for Factory and Warehouse



Handling General Electric Refrigerators with Stacker made by Lewis-Shepard Company.

Trains Salesmen to "Sell the Solution of the Customer's Problem"

Phoenix Kelvinator Man Says the Successful Salesman Must be a Sales Engineer

By Roy George

THE Electrical Equipment Co., Phoenix, Arizona, under the management of M. C. Jennings, has completely reorganized its Kelvinator sales force, in state and local distribution, and instructions to salesmen have been centralized on two things: the mechanics of Kelvinator electric refrigeration and the complete solution of the problems that are brought up by the customer at hand.

"Too much waste has been experienced in the salesman's dependence on the central office force for the answer to the questions of the customer," thinks Mr. Jennings, "and the proper training in meeting this issue demands an accurate knowledge of the mechanics of the system."

"We have been getting an increasing volume of business over the counter, because the country is sold on electric refrigeration now; but there is still an immense field for the highly trained salesman in our special product. We want him to sell alone, to follow his prospect through exactly as if he were the only man in the world who could solve the given problem of the customer and were to be responsible for every step of the installation and servicing of the equipment himself."

"The best thing about such training is that it gives the salesman a sense of authority that has a big effect on the customer."

"Every prospect has a peculiar problem. He has to choose the cooling unit best adapted to his needs, decide on the proper placing of his refrigerator and of the condensing unit, plan his payments and decide on the date of delivery. The salesman must see this problem as a unit and work it out in his own mind definitely and be prepared to present it concisely."

"It is not a matter for argument, but

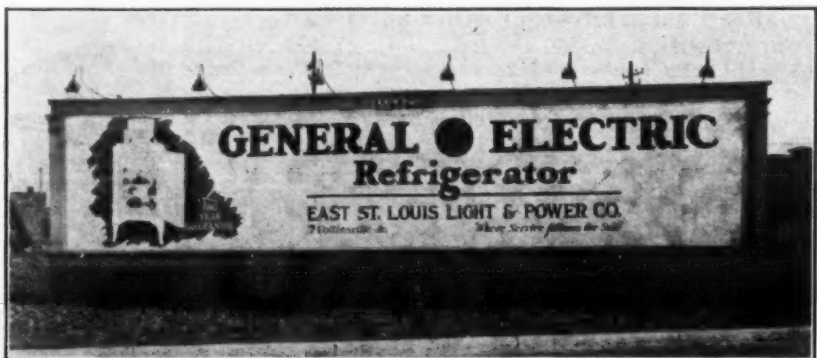
it is a matter for consideration on the part of the salesman followed by the presentation of the correct answer. Anybody can ring the door bell and listen to the customer's queries, but only a trained salesman can grasp the whole problem and present the solution with every assurance that his plan will stand up against the assaults of his competitors."

"There is only one best installation for any given situation, and that is the thing we want our salesmen to see and to present to the customer."

The Electrical Equipment Co. is the biggest general dealer in the state of Arizona, with three distinct departments: automotive electrical equipment, radio supplies and broadcasting service, and electric refrigeration.

"We have used the radio service constantly in presenting the merits of the Kelvinator system of refrigeration," says Mr. Jennings, "and we are now prepared with the most effective sales force in the history of this branch of our business. The time is here for going out and selling the 'solution of the customer's problem' rather than the idea of refrigeration or even a particular unit. The salesman must be a sales engineer."

Day and Night Outdoor Appeal



This Illuminated Painted Sign of the East St. Louis Light & Power Co. is installed on the principal highway leading into the city.

FIFTY FRIGIDAIRE DEALERS ENTERTAINED BY DISTRIBUTOR AT MARSHALL, TEXAS

More than 50 Frigidaire dealers and salesmen attended a one day convention held in Marshall, Tex., June 2. The delegates were the guests of Emory E. Fry, local distributor.

Among those who registered are:

J. K. Chenault, Mount Pleasant; L. O. McClung, Hillsboro; R. W. Caldwell, Waxahatchie; G. O. Dixon, Corsicana; C. R. Hall, Corsicana; A. R. Miesch, Texarkana; B. H. Daves, Terrell; J. R. Collier, Ennis; H. D. Harrison, Ennis; Tom Rutledge, Terrell; J. H. Yancey, Greenville; Tom Hagood, Paris; W. A. Griffin, Blossom; Asa Burroughs, Paris; Mr. Wilson, Greenville; Mr. Reeves, Greenville; Mr. Gallagher, Gainesville, and Mr. Vaeth, Gainesville.

The following from Dallas were present: Mr. Hofmeister, J. W. Britt, W. L. Kamps, C. L. Barlow, R. L. Tayloe, R. A. DeWitt, Sid Sale, George Coker, George Detruering, A. R. Lindsor, Dave Kahn, Red Hall, Roy Roberts, John DeHart, A. T. Carter, I. F. Irion, H. T. Posey, Herb Wolverton, R. Langacre, E. T. Kouns, T. E. Ewing, W. C. Burr, J. H. Hosier, and H. J. Cooper.

NEW DEALERS APPOINTED BY DISTRIBUTORS OF ALLISON REFRIGERATOR

Domestic Electric Refrigerator Corporation, 2 West 46th Street, New York City, announces the appointment of new dealers by various distributors as follows:

Harter & Wickersham, Tipton County, Indiana. Appointed by Capitol Electric Co., Indianapolis, Ind.

Bry-Bloch Mercantile Co., Memphis, Tenn. Appointed by Ozburn-Abston Co., Memphis, Tenn.

Anderson Plumbing Co., Boone, Ia. Appointed by Sieg Co., Davenport, Ia.

The Yahrling-Rayner Co., Youngstown, O. Appointed by Dine-De Wees Co., Canton, O.

The following new dealers have been appointed by the Osterhout Electric Corp.: J. W. Farrell Co., 1529-35 Belfield Ave., Philadelphia, Pa.

Diefenderfer's, 41 No. 10th St., Allentown, Pa.

Branson & Doerr, Vineland, N. J.

R. D. Cockingham, Elmer, N. J.

Pickwell & Co. Inc., 709 West Ave., Jenkintown, Pa.

Climax Machine Goes Through Fire and Water Unharmd

O. Bohny, manager of the Electric Refrigerating and Appliance Co., Dallas, Texas, tells of a Climax Model D methyl chloride machine which recently withstood the ravages of fire and water in a local grocery and meat market.

Mr. Bohny reports that although the side and top of the building was completely destroyed and water from the fire department drenched the machine several times, it was only necessary to provide electric current for the machine to go about its business and continue to supply refrigeration.

Coast Guard Cutters to Have Frigidaires

Four new United States Coast Guard cutters which will be launched in a few months at Quincy, Mass., will be equipped with Frigidaires. Each vessel will have automatic refrigeration equipment installed in three cold storage boxes and one ice cream cabinet, giving it ample provisioning capacity for lengthy operations at sea.

For several months small cooling coils have been used on the smaller patrol boats on duty in southern waters. The coils were placed in the ammunition magazines to protect the smokeless powder, which deteriorates in hot weather.

West Texas Utilities Sells \$46,872 Worth of Appliances in One Week

West Texas Utilities Co. announce that during the week ending May 26 the sale of load building appliances was \$46,872.00. This has been the largest single week during the present year and is at the rate of approximately \$49 per meter per year.

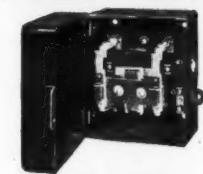
The sales of appliances during the first four months of this year were in excess of \$372,000 or \$118,000 over the budget.

Shanghai Apartment to Be Equipped

Trade Commissioner A. Viola Smith, Shanghai, China, reports to the Department of Commerce that American refrigerators will be installed in an apartment house now being erected in Shanghai. Representation of another refrigerator has been contracted for by a Shanghai firm and shipments are soon expected to arrive.

I-C Automatic Motor Control for REFRIGERATORS

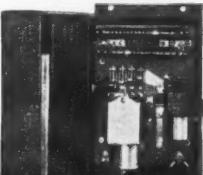
THERE'S A CORRECT TYPE FOR EVERY INSTALLATION



Class 8512 A. C. Contactor

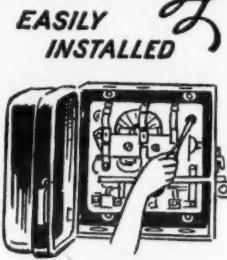


Class 8532 A. C. Starter

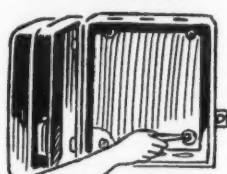


Class 7107 D. C. Starter

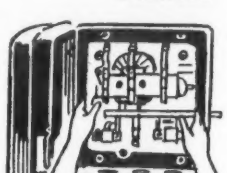
A standard feature of all I-C Control is the removable mechanism panel. This arrangement is greatly appreciated by the electrician as it facilitates wiring--and all connections are accessible.



LOSEN 3 SCREWS



INSTALL CABINET



REPLACE PANEL AND MAKE CONNECTIONS

Overload protection can be provided where necessary and is arranged so that it can be reset without opening the enclosing cabinet.

For complete information write for catalog describing a complete line of contactors and A. C. or D. C. Automatic Starters

Industrial Controller Co. MILWAUKEE, WIS. U.S.A.

Wirfs Gasket

assures

Electrical Refrigeration Efficiency



An electrical unit can only be as efficient as the box in which it is installed. Poor door contacts on wood or metal boxes mean that any unit will have to operate a greater number of hours to maintain an efficient refrigeration temperature. This means added operating cost.

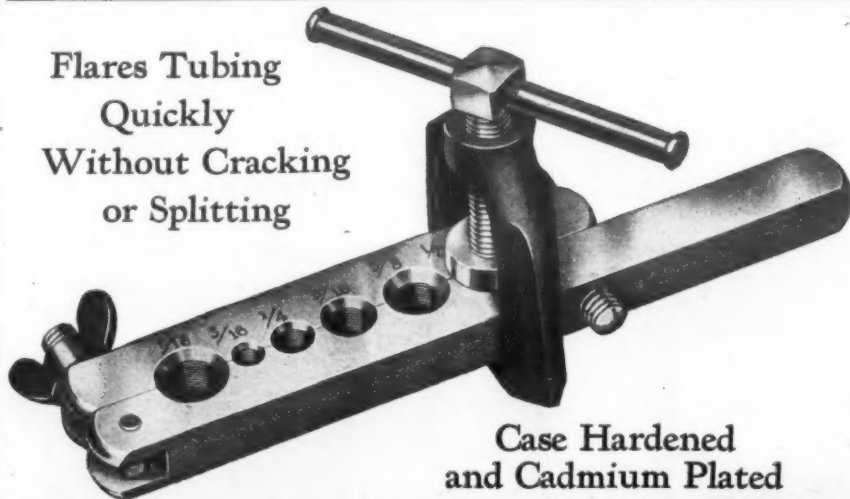
Wirfs PATENTED "AIRTITE" Gasket

Keeps the cold air in and the warm air out and maintains the proper zone of refrigeration with fewer operating hours. Wide awake dealers have found that it usually clinches the sale. Most manufacturers supply boxes equipped with Wirfs; write us for their names and a sample.

E. J. WIRFS ORGANIZATION, Inc., 135 S. 17th St., St. Louis, Mo.

Imperial Flaring Tool

Flares Tubing Quickly Without Cracking or Splitting

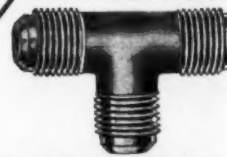


Case Hardened and Cadmium Plated

The new Imperial Flaring Tool gives the proper flare and taper to tubing for making up joints. A perfect flare means a tight joint, and this tool does the work in the least time and with the utmost simplicity. No loose dies--no vise necessary. Tubing can be clamped, flared and removed in less than 30 seconds. No. 93-F takes tubing sizes 1/8", 1/4", 3/8", 1/2", and 3/4". Each.....\$3.00 No. 95-F takes tubing sizes 1/2", 3/4", 1", and 1 1/4". Each.....\$4.00

Send your order today!

IMPERIAL BRASS MFG. CO. 565 So. Racine Ave. Chicago, Ill.



BRASS FORGINGS

Accurately made to meet all the requirements of Iceless Refrigerator Manufacturers. Will not leak. Let us quote on your requirements.

Wisconsin Power & Light and General Electric Salesmen in Joint Meeting at Beaver Dam



Forty-five salesmen and executives of the Wisconsin Power & Light Co. of Madison attended a joint meeting with the Electric Refrigerator Co. of Milwaukee, General Electric distributors, at Beaver Dam, Wis., on June 1.

One of the big features of the convention was the discussion of merchandising plans for electric refrigerators, a discussion which brought forth many experiences of the men working in this territory. L. M. William, general commercial man-

ager of the Wisconsin Power & Light Co., opened the meeting in an enthusiastic manner, pointing out the great progress that has been made this year.

E. H. Schaefer, president of the Electric Refrigerator Co., spoke on sales plans for the coming year and of the outlook throughout this territory. D. E. Breckenbridge, direct representative of the General Electric Co., talked on the product. Many important steps in the development of General Electric were pointed out,

steps which should be emphasized to the customer.

A very interesting talk was given by Gordon Philips on "Selling the General Electric." Mr. Philips' talk was filled with examples of merchandising methods employed by successful dealers.

Ray Arnold, of the Electric Refrigerator Co., discussed "Advertising and Retail Selling," stressing the important part which the right kind of advertising has in selling electric refrigerators.

A Comparison of D.C. and A.C. Electric Motors for Refrigeration Service

Direct Current Is Less Troublesome; Improvements in Alternating Current Motor Design are Eliminating Objections to this Type

By John B. Rathbun, Chief Engineer, Utilities Engineering Institute, Chicago

THERE are few problems to be met with the direct current motor excepting for the matters of brush adjustment and a very occasional servicing of the commutator. It has a very remarkable starting torque, and if the line wires are anywhere near ample size, the starting and stopping of the D. C. motor has little effect on the lights. In many ways the old D. C. motor is an ideal motor, and one can consider himself fortunate when he has access to D. C. service and doubly fortunate when his customers are provided with D. C. service. When using direct current we are not concerned with the matter of power factor, wattless currents, line surges, or any of the other complications that attend the use of an alternating current motor.

Mechanically speaking, the alternating current induction motor is ideally simple, at least from external appearances, but such is not the case from an electrical standpoint. There is no commutator on some of them, and the rotor looks just what a rotating part should look like—heavy and substantial and free from insulated wires. In practice and in every-day service, this outward symbol of simplicity is deceiving, for it can kick up more disturbance in one second than its relative, the D. C. motor, would start in a whole week's work.

Low Starting Torque of the A. C. Induction Motor

In the first place, the straight induction motor has a very low starting torque or starting effort. So low, in fact, that most electric refrigerator builders are either using or considering the use of an unloading device that will take off the load until this motor gets under way. This is a common failing of all straight induction type motors and the criticism is not aimed at any one make or variety. If the motor is to get away with the inertia of the compressor flywheel and the friction load plus the compression of an instant it must either be oversized or else we must make some additions to it. A simple split-phase induction motor is a good deal like an automobile engine, it must be cranked up and started by some feeble agency external to its own essential parts.

To get a good start it is necessary to annex some slip rings or commutators and brushes, thus getting right back to where we started with the direct current motor so far as complication is concerned. In addition we may have a few added accessories such as a centrifugal switch or a highly complicated mechanism for throwing the brushes off the commutator and short-circuiting the bars when the motor gets up to synchronous speed. When the single phase A. C. motor is really brought up to the point where it is approximately the equal of the D. C. motor in regard to performance, it becomes even more complicated than the D. C. motor, both mechanically and electrically.

Power Factor is Strictly an Alternating Current Problem

Now we enter into the matter of "power factor" with which the D. C. motor is not concerned in the least. In the D. C. circuit the volts and amperes occur simultaneously under all

ordinary conditions, so that the product of the volts and the amperes represent the power in watts at all times and all places. With a constant voltage on the motor, the current taken is directly proportional to the amount of power taken from the mains. Nothing so simple as this with the A. C. motor.

When the induction motor is hooked up to the A. C. circuit, it immediately introduces "self-induction" into the line which may be compared to electrical inertia. In other words, the inductance of the motor causes the current to lag behind the voltage so that they no longer occur at the same instant. If we now multiply the volts by the amperes, we find that this product is a good deal greater than the power actually being taken. With inductance in the A. C. line due to the windings of the induction motor, the amperes no longer indicate the load nor are they in direct proportion to the load as they were with the D. C. motor. The motor might be drawing 100 amperes at 125 volts and yet might not be delivering enough power to crush a small sized gnat's heel.

The Motor Growls and the Lights Blink

In starting, the effect of inductance is still further in evidence for the motor is pulling a good many times its normal starting current and yet the lag of the amperes behind the volts is so great that the effective power is hardly more than enough to overcome the motor's own friction. This sudden rush of current causes a voltage drop on the line which causes all of the lamps to blink in sympathy accompanied by a deep bass growl from the motor. These are two of the charming effects always in attendance with A. C. operation. Every time the refrigerator starts, down go the lights and up comes the growl.

We, as manufacturers of electric refrigerators, cannot very well compel the electric service company to change their plant over to D. C. Neither can our customers afford to install wiring as large as the cables of the Brooklyn Bridge to overcome the voltage drop due to the rush of initial current. What we can insist upon, however, is that the builders of A. C. motors compensate their motors against low power-factor, large wattless currents and light flickering just as one company is now doing. This will probably add expense, but to my idea it is money spent in the right place.

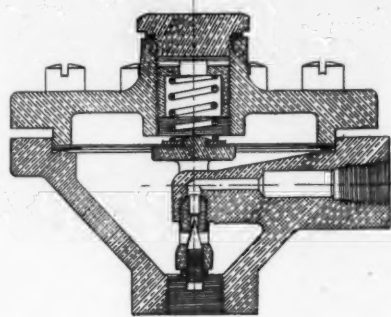
There are several ways by which the effect of self-induction can be overcome with a plain induction motor, and one of these methods is to introduce a condenser effect or capacity that neutralizes the induction and brings the amperes back into phase with the volts where they belong. A condenser of sufficient capacity to overcome this defect will

cost some money. It is only a question as to whether the improvement in the service justifies this expenditure. There is one manufacturer that does think so, but he is also the maker of the motor. I believe that the matter of compensation should receive immediate attention, and along with it, investigations into noises caused by the blower or fan.

Announcing

The "Heideman Liquid Control Valve"

An expansion valve with many points of superiority



Sensitive
Self-Cleaning
Non-Corroding
Simple in Design

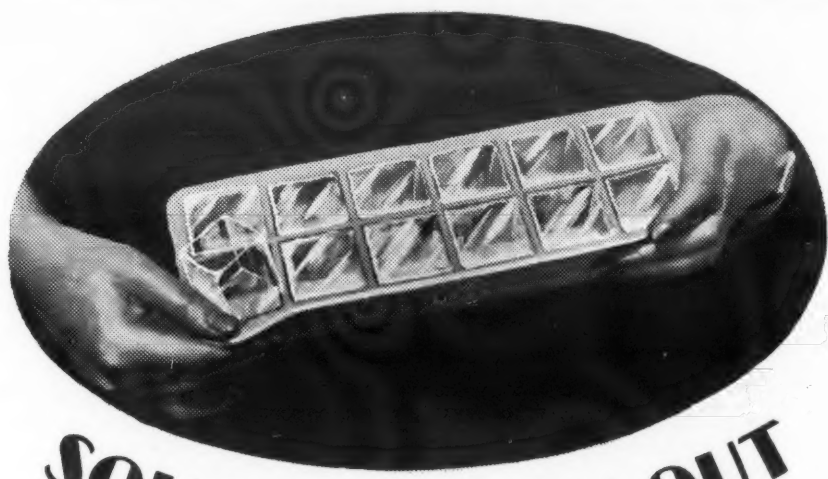
Self-Aligning
Positive in Action
Positively Stays Put
Moderately Priced
One Easy Adjustment

We are now in production and can supply your immediate requirements. Write or wire for quick delivery.

F. J. HEIDEMAN

6331 E. JEFFERSON AVE.

DETROIT, MICH.



SQUEEZE THEM OUT

Ice Cubes Can't Stick to the

COPEMAN

ICE TRAY

PATENTED

NO more blasting to get ice cubes out of automatic refrigerator trays. The new Copeman Ice Tray does away with the trouble and annoyance of heating, prying and digging to loosen ice cubes from metal trays. The cubes *must* come out—because they can't stick to the sleek, white sides of the Copeman Ice Tray.

By using pure white rubber the

Harwell Rubber Co., Inc., make this convenient, temper-saving new tray that can be emptied of one or all of its cubes in an instant—merely by a twist of the flexible rubber tray.

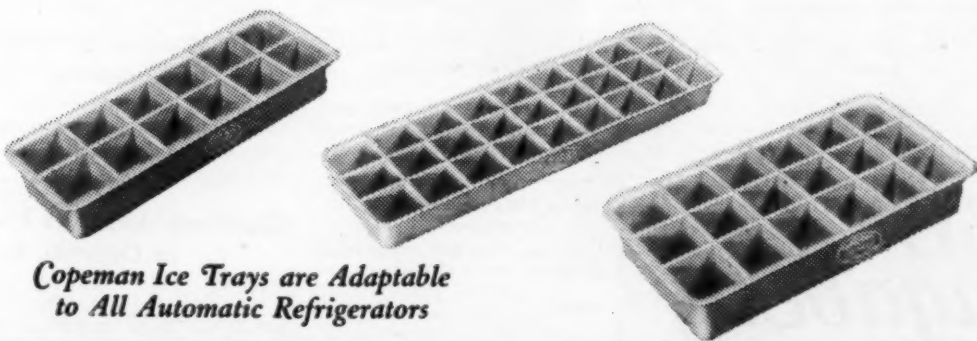
Automatic refrigeration is saving ice-box inconveniences in thousands of homes; now it can save time, temper and trouble with the marvelous new Copeman Ice Tray.

Prices and Information On Application

HARWELL RUBBER CO., INC.

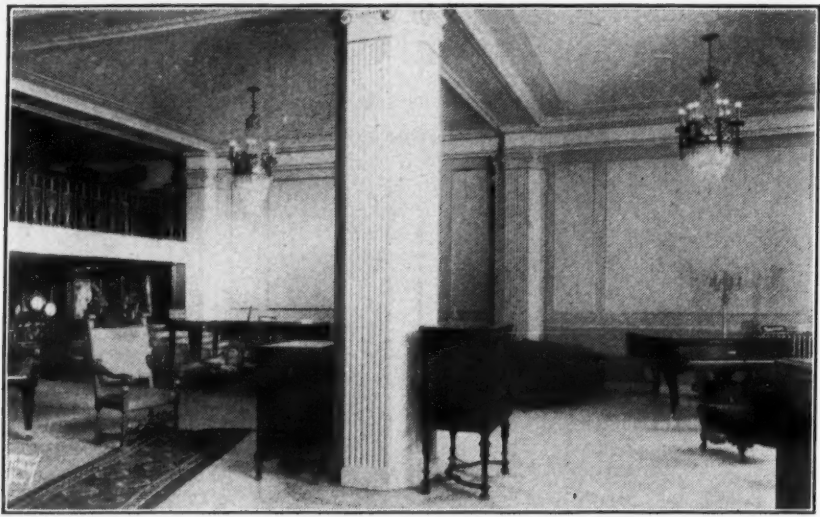
Sole Manufacturers and Distributors

5 E. 44th Street, New York



Copeman Ice Trays are Adaptable to All Automatic Refrigerators

Milwaukee Music House to Sell Iroquois Electric Refrigerators



The above picture of one-half of the Kesselman-O'Driscoll store gives an idea of the atmosphere of grandeur which will surround the display of electric refrigerators.

DEALERS and merchandising experts will find another example of the sisterhood existing between Queen Ann and Mary Ann in the announcement that Kesselman-O'Driscoll, of Milwaukee, Wis., have become wholesale and retail distributors for the Iroquois electric refrigerator in the Fox River valley and northern part of Wisconsin.

Kesselman-O'Driscoll are the largest wholesale and retail music house in the State of Wisconsin, retailing and distributing such products as Mason Hamlin, Knabe, Chickering, Ampico reproducing grands, the Atwater-Kent, Freshman and Radiola radios, violins, band and orchestra instruments. They operate as the Kesselman-O'Driscoll Music House for retail business and as the Music Arts Wholesale Co. for the wholesale, turning over about a million dollars a year from these joint interests.

A seven-story building was completed and moved into just before the holidays, equipped with concert hall, sound-proof practice rooms, and period display parlors for the various types of pianos and cabinets. A section on the second floor, together with a show window has been set aside for displaying the electric refrigerator models.

There are many radio shops that have equalized the selling seasons by becoming dealers for electric refrigerators, but this is the first known instance in which an exclusive music house applies business methods and the atmosphere of the fine arts to the subject of hygienic and unquestioned food protection.

Music Business at Low Ebb in Summer Months

In speaking of the innovation, L. M. Kesselman, president of the Music Arts Corporation, stated "While at first thought some may question the association of electric refrigerators and baby grands, closer thought will show both an aesthetic and business relationship. There are four summer months when the sale of musical goods is at low ebb. These happen to be the peak sale months for electric refrigerators because summer climate makes the need for absolute cold in keeping food safe for human consumption. Surely, perfect food refrigeration is as important and satisfying to the busy life of the modern home as is the most exquisite sonata reproduced on one of our Ampicos in that same home.

But the business considerations that in-

fluenced us to add electric refrigerators show that our organization could fit this new department into our company with very few changes. Our ownership plan of purchase will handle time payments for refrigerators just as is done for pianos and other instruments.

We already have in our service department electrical experts accustomed to the intricacies of repairing valuable reproducing grands and delicate radios. Their technical training has been augmented by installation engineers from Iroquois headquarters who conducted a special course for them in the fine points of electric refrigeration. In this way our service department will function 100 per cent the year around with no additional outlay for engineering skill.

Prize Essay Contest as Introductory Feature

Our advertising department will spread the story of the merits of the Iroquois electric refrigerator throughout the state in the same thorough manner we have always used in merchandising. As an introductory feature in each territory, we run a prize essay contest, installing a unit as the first prize and making a \$10.00 allowance on the next fifty best articles on "Why I Want an Electric Refrigerator."

As we appoint dealers in cities and towns throughout the state, we give them advertising support and the resources of our service department for their installations."

G. O. Barnes Joins Sacramento Frigidaire Branch as Sales Manager

George O. Barnes, formerly connected with Buick and Franklin Motor Car agencies in Sacramento and San Francisco, Calif., has become sales manager of the Sacramento branch of the Frigidaire Corp., located at 1022 12th St.

CHARGE PIONEERING TO PROMOTION—NOT MERCHANDISING

Expenses incurred in the pioneering of appliances which have not yet met with sufficient public acceptance to be merchandise items in the stocks of local progressive dealers, and general advertising for the development of the market for appliance service, should properly be charged to the promotion accounts of the utilities and not charged to merchandising.—From the report of the N. E. L. A., Public Policy Committee, presented by R. H. Ballard, chairman, at Atlantic City.

Copeland Appoints Schimmel Electric Supply Co. as Philadelphia Distributors

Appointment of the Schimmel Electric Supply Co., 556 Arch Street, Philadelphia, as distributors in the Philadelphia territory for Copeland electric refrigeration is announced by Copeland Sales Co., Detroit.

Copeland Water Coolers for Manila Club

Five Copeland water coolers are to be installed in the Army and Navy Club of Manila by the American Electric Co., Inc., of Manila, P. I. This club is one of the most prominent in the Far East. The American Electric Co. recently was awarded first prize for electric refrigeration at a Manila exhibit.

Buys Partnership in Oakland, Calif., Frigidaire Agency

J. W. Culton, of Oakland, Calif., has purchased a half interest in the Frigidaire sales office from L. W. Fulkert. The firm, which will control Stanislaus, Merced and Mariposa counties, will be known as the Fuller and Culton, with headquarters in Modesto.

Will Distribute Allison in North Carolina

Vaughn, Inc., of Greensboro, N. C., have taken over the distribution of Allison electric refrigerator. They will control about three-fourths of the state and their territory includes the cities of Charlotte, Winston-Salem and Raleigh.

W. H. Brandow Joins B. I. Cooper Sales Co. as Wholesale Manager

Appointment of W. H. Brandow as wholesale manager for the B. I. Cooper Sales Co., Inc., Syracuse, N. Y., Copeland distributor, has just been announced. Mr. Brandow formerly was district manager for the Kelvinator-Syracuse, Inc.

To Sell Servels for Southern Indiana Gas & Elect. Co.

Edward McGinness, former manager of the refrigerator sales department of Anderson and Hatch, Copeland distributor, has been engaged as crew manager of the Serval sales department, Southern Indiana Gas and Electric Co., Evansville, Indiana.

Tucumcari Lt. & Pr. Co. Sells General Electrics

Tucumcari (N. Mex.) Light & Power Co., received their first shipment of General Electric refrigerators early in April and during the month placed four of them in service among customers.

New G. E. Dealer at Miami

Hill Brothers Electric Co., a new organization, has been appointed dealers for the General Electric refrigerator in Miami, with territory from Fort Lauderdale to Homestead. Edwin H. Hill is manager of the company. The showroom is at 30 S. Miami Ave.

Allison Distributor Appointed for Houston, Texas

The Star Electric and Engineering Co., 613 Sannin St., Houston, Texas, has been appointed distributor for the Allison electric refrigerator.

C. H. Ward to be Frigidaire Agent in Ventura, Calif.

C. H. Ward has been appointed Frigidaire dealer in Ventura, Calif., and adjacent territory.

Copeland Appoints Hardware Co. in Oelwein, Iowa

The Kennerly Hardware Co., Oelwein, Iowa, has been appointed local agent for Copeland electric refrigeration.

SEASONABLE AMUSEMENT DURING WARM SPELL

[Punch (Copyright).]



Millionaire's son, with his own refrigerating plant, enjoys a monopoly in snowballs.

The Ashland agency for Frigidaire in eastern Kentucky recently installed refrigerating equipment in the Bagby Sweet Shop, Grayson, Ky. The Woolery market there also has been fitted out with a Frigidaire.

Recent Installations
Lennard Sears, McConnsville, Ohio, has installed a Frigidaire equipped soda fountain in his drug store.
A contract for installation of Frigidaire equipment in Knoxville, Tenn., General Hospital, has been awarded to the East Tennessee Electric Co.

LASSEN — TEMPERATURE — CONTROLS

POSITIVE RANGE AND DIFFERENTIAL ADJUSTMENT
NON-DETERIORATING MERCURY TUBE SWITCH—MEET ALL REQUIREMENTS
GOODNOW & BLAKE MFG. CO. 3840 BEAVER STREET DETROIT, MICH.

AUTOMATIC ELECTRIC CONTROLS NON-DETERIORATING MERCURY SWITCHES

Simple — Dependable ABSOLUTE ELKHART
Accurate — Safe CORPORATION INDIANA

E. T. L. Service for Domestic and Commercial Electric Refrigeration

Testing and experimental laboratory service for manufacturer, distributor, central station
Test data exclusive property of client
ELECTRICAL TESTING LABORATORIES
80th Street and East End Avenue, NEW YORK CITY, N. Y.



Electric Refrigeration

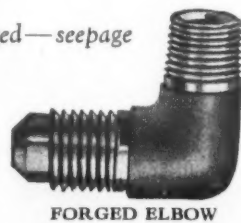
WINTERS & CRAMPTON MFG. CO.
GRAND RAPIDS, MICH.

Mueller forged Fittings For Mechanical Refrigeration



FORGED UNION NUT

This nut is made to meet the demand for an exceptionally strong fitting.



FORGED ELBOW

All Mueller Electric Refrigerator Fittings are especially designed to meet the requirements of mechanical refrigeration work.

They are forged—seepage is impossible.

A complete line of fittings are carried in stock—always, for quick shipment.

Mueller fittings can be supplied to suit your special requirements

Send us samples or blue prints for quotation

Mueller Brass Co.
PORT HURON, MICH.

THREE GENERATIONS OF BRASS MAKING

Easy to handle REFRIGERATORS with this New Sling and Jacket



The sturdy 3-ply belting slings are reinforced with harness leather and fastened with a buckle.

THIS canvas covered, flannel-lined Slingabout provides protection to your refrigerators and brings greater ease of handling. It consists of a heavy padded canvas cover, lined with soft, quilted flannel. Sturdy 3-ply belting slings, reinforced with harness leather, sewed and riveted, strap the jacket firmly in place. These slings make ideal hand-holds—enable a man to get a good sure grip.

Slingabouts give ample protection to fine enamel and lacquer finishes. It is not necessary to go to the trouble and expense of crat-



The heavy slings make ideal hand-holds. Men can get a good grip and loads seem lighter.

Slingabouts eliminate the danger of scratching or marring. And, they make a CLEAN delivery.



ing refrigerators for truck shipment.

Webb Slingabouts are made in sizes to fit every refrigerator. The attached coupon brings you prices and complete information. Fill it in now.

WEBB
Slingabout

CHARLES J. WEBB & CO.
116 Chestnut Street
Philadelphia

Charles J. Webb & Co.,
116 Chestnut Street
Please send me full information about the Webb Slingabout.

Name.....
Address.....

Important Features in Design of Household Type Refrigerator Cabinets Discussed by A. S. R. E.

Advent of Machine Has Required Cabinet Manufacturers to Evolve New Methods of Construction

Extracts from a paper by Harold L. Pope and J. Russell Brown, of the Leonard Refrigerator Corp., read at the Detroit meeting of the American Society of Refrigerating Engineers, June 4-7, 1928.

JUST what constitutes a good ice refrigerator of the household type? One might receive many different answers to this question. The true answer is found not in any one feature desired, but rather in a combination of features. The following items are believed to cover this question:

1. Temperatures satisfactory for the preservation of food, compatible with economy of operation.
2. Absence of objectionable odors.
3. Complete air circulation.
4. Utility value.
5. Ease of cleaning.
6. Beauty of proportion and finish.
7. Durability.
8. Adaptation to mechanical refrigeration.

In order to stimulate discussion on these subjects comments on each item will be made. It must be remembered that many of these items are a function of initial cost, and, therefore, the aggregate of value delivered for the price required is the true measure of service to the owner.

Requisites for Insulation

The question of insulation is a broad one, deserving of much greater comment than can be made here. In general, the main requisite for insulation, from the performance point of view, is a relatively low thermal conductivity over the period of life of the refrigerator, obtainable at a reasonable cost. This statement suggests many desirable features, such as moisture resistance, lack of objectionable odors and the ability to hold its original form.

At the present time corkboard is probably the most popular refrigerator insulator on the market. Although there are many insulating materials having a lower coefficient of heat leakage, most of them lack certain other desirable traits such as moisture resistance, and ability to hold original form and shape. Corkboard, therefore, notwithstanding its higher cost, has become most popular. There is a great opportunity in obtaining valuable insulating materials from waste in various industries. Research and development along these lines is in progress and no one can predict what kinds and types of insulation may be the result. Insulation is incidental to refrigerators; performance is of major importance. The public is gradually being educated, and the time is not far distant when a refrigerator will be purchased on the basis of performance rather than incidentals, which certainly is the present day trend in marketing the products of other industries.

Objectionable Odors

There are a great many causes of odors in refrigerators. In general they may be divided into the following three classes:

1. Odors caused by the refrigerator itself.
2. Odors caused by materials placed in the refrigerator.
3. Odors from the outside of the refrigerator proper.

The most prominent offender under the first class is insulation. Certain insulators, especially after absorbing moisture, give off an objectionable odor, very liable to seep into the interior compartments, causing well-justified complaint. The only satisfactory remedy for this trouble is to seal all crevices with some compound preventing the seepage through to the interior chamber. Care should be used in the choice of such compound, in order to obtain a material which, after hardening, will not crack or crumble. Such sealing should be done, irrespective of the insulation used, for moisture from the interior will be absorbed by the insulation developing foul odors, which in turn will seep back into the interior chambers. The dipping of insulation in an odorless asphalt solution is an excellent precaution, although rather expensive and troublesome to apply under production conditions. An excellent substitute for this method is the use of a good grade waterproof paper wrapped around the insulation, all joints being sealed with odorless asphalt.

The materials used for finishing the interior of the cabinet, such as paints, enamels and lacquers, are frequently the source of odors. The obvious remedy for this condition is the use of finishes free from inherent odor when dry. All solvents used in finishes have distinctive odors that are eliminated only by thorough evaporation of that solvent. It is an excellent plan to instruct all dealers to ice up each cabinet, leaving the doors slightly ajar, before placing them on the show-room floor. This greatly aids the elimination of residual odors of this type. Care should be exercised in the use of the so-called odorless lacquers now on the market. In many cases the best that can be said about such lacquers is that they are less odorless than the regular commercial types.

The recent advent of mechanical refrigeration as applied to household refrigerators, has placed before the refrigerator cabinet industry, problems which heretofore had not been encountered. In the past the design of refrigerators consisted of largely cut-and-try or rule-of-thumb methods with no very definite objectives in performance. The application of correct engineering principles to the design of refrigerator cabinets is now a necessity, in order to raise the standard of service required. The refrigerator cabinet using ice for cooling must not only be a good ice box, but it must incorporate the features required in its satisfactory adaptation to mechanical refrigeration. Evolution in design as applied to refrigerator cabinets is rapidly taking place, due to the impetus given the industry through the advent of mechanical refrigeration. The refrigerator cabinet industry must adjust itself to the more advanced conditions.

Some woods, notably cypress, have a distinctive odor which is objectionable under conditions of high humidity. The use of such woods should be guarded against and construction materials used such as to remove this possible source of odor.

Odors due to the characteristics of the sealing compound used and remnants of soldering flux may be eliminated through careful choice of material and thorough cleaning.

The second group composed of materials placed into the refrigerator may only be corrected through the proper education of the public. Frequently foodstuffs are spilled in refrigerators and not thoroughly cleaned out. The result is a gradual decomposition, resulting in a highly disagreeable odor.

The constant passage of small quantities of cold drain water promotes the growth of certain organisms which appear as thin gelatin-like slime clinging to the drain pipe. These organisms are probably all of a vegetable origin and their spores are constantly present in the air. A thorough cleaning, preferably with warm water, removes this source of odor.

The third group, consisting of odors from the outside, is due to the seepage of fumes and gases of various mixtures through openings in the refrigerator to the interior. This class of odors is not frequently encountered, although at times is the source of trouble difficult to locate. The fumes consist chiefly of those generated in the course of cooking. The correction for this difficulty consists in proper construction of door joints. Odors of this nature have been traced to entrance through a dry drain trap when mechanical refrigeration is used. It is a good plan to inform the customer to pour a cup full of water into the trap periodically, thus keeping it sealed, preventing the ingress of odors and egress of cold air.

Air Circulation

In order to cool properly, purify and dry the air inside a refrigerator, it is necessary to have thorough and complete circulation of that air. Flues should be so designed as to eliminate dead air pockets, frequently the cause of tainted foods. Little has been done to determine the relative advantages of the various types of flue construction on the market. In the conventional type of flue construction little is known of the effect produced by varying areas of the flue opening. A program of research on this subject might reveal some very interesting information, which in its application to refrigerator design would greatly increase its service value. For example, a restaurant owner complained that when the temperature of his refrigerator was sufficiently low to preserve fresh meats, he was troubled with chilled salads quickly wilting when exposed to room temperature. If the temperature was relatively high and satisfactory for the preservation of salads, he had difficulty in preserving fresh meats. Would it not be possible to have an arrangement of flues which would permit various desired temperatures in different compartments of the same cabinet? Visualize the possibility of a horizontal set

of adjustable baffles across the provision compartment of a conventional three-door cabinet, with a by-pass opening into the cooling chamber, thus restricting the air flow and no doubt permitting higher temperatures in the upper portion of the provision chamber, with relatively low temperatures in the lower portion. The more one thinks along the lines of air circulation the more possibilities are revealed, which would probably develop into a prolific field of research. There is no question but what the present methods and means of air circulation are very elementary and subject to interesting fields of investigation.

Utility Value

The utility value of a refrigerator has to do with its size and arrangement of provision compartments, shelves and special features incorporated in the design. To a great extent its value is determined by certain governing features of design, which more or less limits the arrangement of the interior. In general, it may be said the present trend is to locate the provision chambers in a more accessible position; that is, in a higher location than has been the custom, thus requiring less bending of the body to deposit and obtain various articles from the interior. This is accomplished by placing the conventional type refrigerator upon a separate or integral base, thereby raising the cabinet proper some 10 to 20 in. from its normal position. Such bases are used for the installation of drawers or bins, providing additional storage space of a non-refrigerating nature. Oft times after the installation of mechanical refrigerating equipment it is used for housing and condensing unit. The quality refrigerators of the future will no doubt incorporate some such general arrangement, inasmuch as its accessibility has a very definite sales appeal.

In general, it may be said the distance between shelves should not be less than 5 in. for cabinets of smaller depths. As the depth of the interior increases the distance between shelves should also increase, in order to permit more clearance for extending the arm into the cabinet. Probably a distance of 5 in. between shelves on a chamber of 12 in. depth varying to 8 in. for chambers 20 in. deep permits of fair accessibility and excellent economy of provision compartment interior.

It is most important to provide space for containers unusually high, such as milk bottles. The highest standard milk bottle in common use is 9½ in. high, which suggests the height of the first shelf above the floor of about 10 in. In most designs of three-door cabinets sufficient height may be obtained in the small provision compartment immediately under the ice chamber. This, of course, is an ideal position for such storage. Increasingly more common is the household use of various beverage bottles in a rather miscellaneous assortment of containers, most of which exceed the height of quart milk bottles. It, therefore, increases utility value to provide for such containers. A very excellent and inexpensive method is to make the first shelf several inches less deep than the regular shelves, thus permitting increased height for such bottled goods when resting on the refrigerator floor.

Ease of Cleaning

The quality of a refrigerator determining its ease of cleaning possibilities is to a large extent dependent upon its interior and exterior finish. There is no question that porcelain cleans more readily than baked enamel on sheet metal, or that baked enamel cleans more readily than air or forced dried enamel. Such features are quite dependent upon price. However, there are certain features to bear in mind in designing any class of refrigerator. The elimination of concealed and inaccessible corners, both on the interior and exterior surfaces, is much to be desired. Many refrigerators now on the market have the interior lining overlapping, thus permitting crevices for the lodgement of dirt. In a great many cases nails are used to hold many parts of the lining in place, thereby destroying the smooth interior surface and always presenting an obstacle for the cleaning cloth to catch against. Not only is this true, but with such construction it is quite impractical to seal the joints, preventing the insulation from absorbing moisture, thus reducing its insulating qualities. The only apparent satisfactory type of interior lining is that type of chamber which is built as a separate assembly, or partially so, with welded or lock seam joints. It is only with this

construction that satisfactory sealing and ease of cleaning may be obtained.

Beauty of Proportion and Finish

This quality to a great extent is a function of individual taste, and may be incorporated in refrigerator design by carefully analyzing the trend of style in closely allied industries. For example, the present trend in style of kitchen equipment appears to be towards the harmonizing of colors to present an entirely radical group appearance from that which has been the custom. The pure white finish of kitchen equipment so prominent several years ago has given way to various combinations of colors which in group effect present an altogether pleasing and harmonious whole.

The refrigerator design problem, therefore, resolves itself from this perspective to one of co-ordination. Although it is not always possible, frequently a two-tone finish of a refrigerator may be made which will harmonize with the most popular color schemes in current use, thereby making a production proposition of the job. Not-
(Concluded on Page 22, Col. 4)

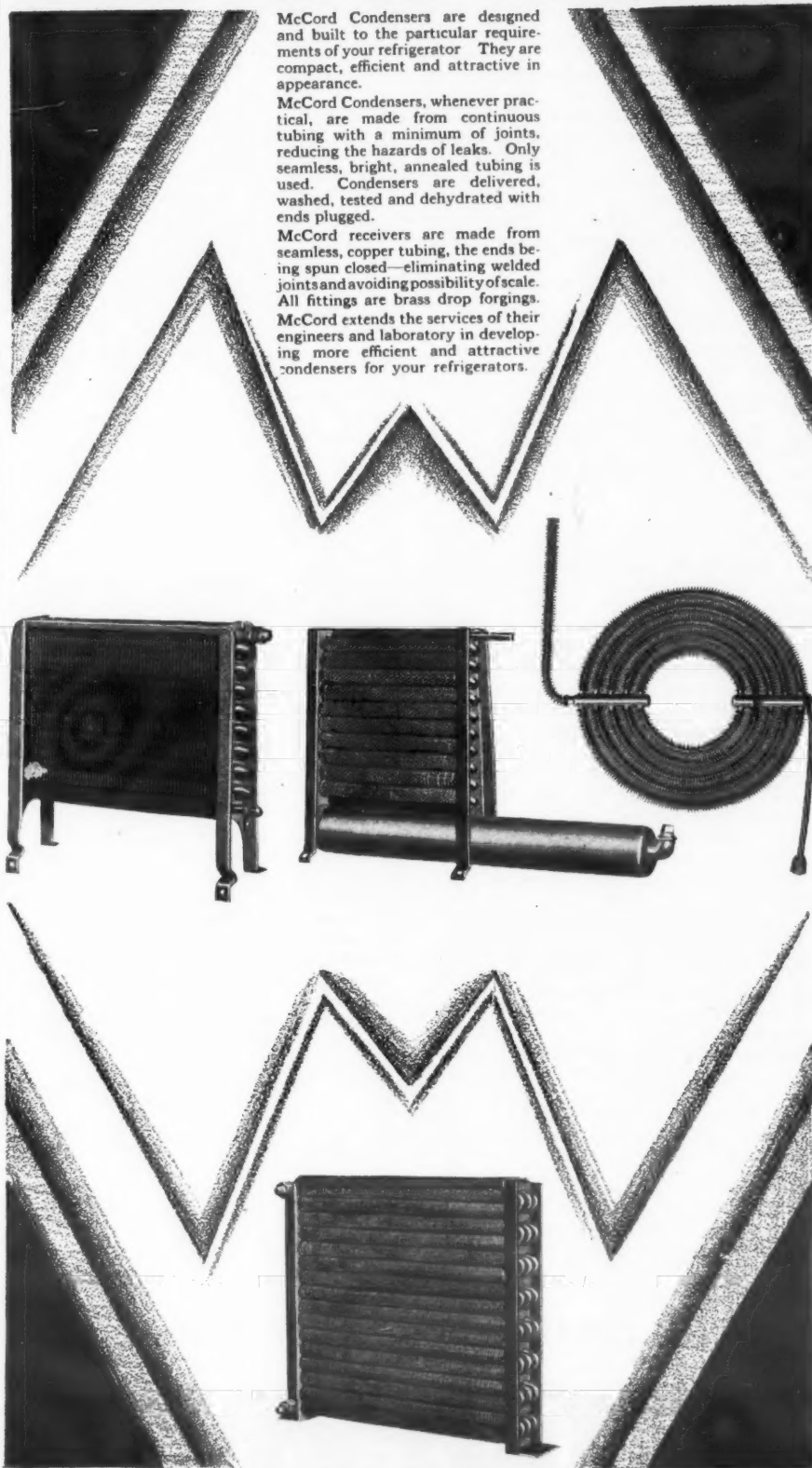
LIGONIER Refrigerators

Give your Electrical REFRIGERATION Units a Chance to Prove their Quality!

A Complete Line of Commercial Refrigerators...Counters and Market Coolers.

LIGONIER REFRIGERATOR COMPANY
100 CAVIN ST.
LIGONIER-INDIANA.

MCCORD-BUILT CONDENSERS



McCord Condensers are designed and built to the particular requirements of your refrigerator. They are compact, efficient and attractive in appearance.

McCord Condensers, whenever practical, are made from continuous tubing with a minimum of joints, reducing the hazards of leaks. Only seamless, bright, annealed tubing is used. Condensers are delivered, washed, tested and dehydrated with ends plugged.

McCord receivers are made from seamless, copper tubing, the ends being spun closed—eliminating welded joints and avoiding possibility of scale. All fittings are brass drop forgings. McCord extends the services of their engineers and laboratory in developing more efficient and attractive condensers for your refrigerators.

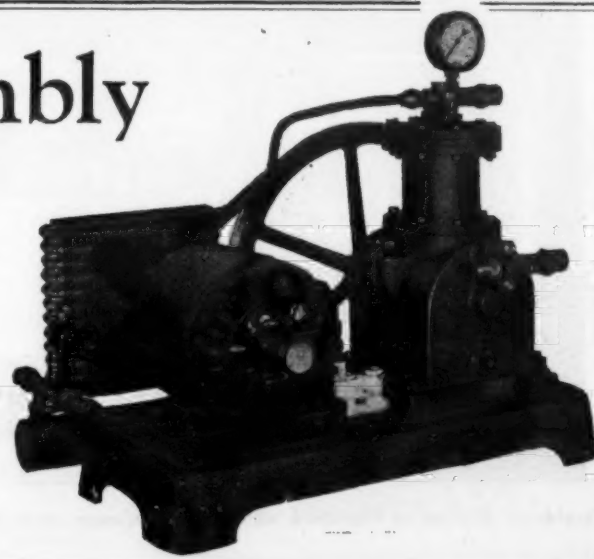
MCCORD RADIATOR & MFG CO
DETROIT MICH.

High Side Assembly

We offer the Kulair High Side as the successful result of countless experiments and research work by our engineers in their efforts to perfect a truly balanced combination of compressor, motor, condenser, liquid receiver, fuse block, necessary valves, etc., all mounted on a mechanically designed base that can be installed readily in all of the standard cabinets as well as for remote installations.

Write for Illustrated Folder.

Franklin Air Compressor Corporation
Norristown, Pa.



Says Young Men Do Not Make as Good Refrigeration Salesmen as Those More Mature

Says He Wants Mature Age, Not Youth, on His Sales Force

HENCEFORTH all new salesmen I put on my staff will be men between the ages of 35 and 50. I shall let the youngsters go as rapidly as I can in fairness to them, as well as to myself, and my firm. An experiment has proven to me that the older men, though they may not be as spry, are going to be the best from the standpoint of domestic refrigeration sales.

There are several reasons.

We must remember that in domestic refrigeration sales, the salesmen must make frequent calls at the home. Sometimes the husbands are not at home. The salesman may be a good looking young chap and the lady of the house a beautiful woman of whom the husband is extremely jealous.

Not long ago, such an incident came to my attention. We had, and still do have, a youngster about 25 years old on our sales staff. He's a good looking and an excellent dresser. One of his prospects was a young couple, the husband an acquaintance of mine. In demonstrating the machine, the salesman found it necessary to call back to the house from time to time and sometimes the husband wasn't at home.

I received a telephone call from the husband one day and the burden of his conversation was that he wished to goodness I would put an older man on that demonstration. "Nothing wrong, you understand, but I just don't like such young fellows calling at the house when I'm not at home," he concluded. I appreciated his attitude, pulled the youngster off that prospect and put an older man—at least he appeared older, for he had gray hair—on the job. The commission was split equitably, the youngster getting a larger share than the man who closed the deal, for the youngster had uncovered the prospect and had gotten the machine in the home or demonstration.

We do not know just how many sales have been queered by a little jealousy or the part of the young husbands when we send well-dressed, good-looking young salesmen out to sell our product. We have thus far considered that our salesmen should present an excellent appearance when they call at the homes of prospects; we have felt that the younger fellows had more pep and ginger than the older men and that they could cover more ground in a day. Undoubtedly they can make many calls in eight hours, but what good is it doing, if they are not concentrating their attention upon the selling of the machine and have short mental lapses occasioned by their admiration of the young housewife?

A man who is 35 years old or more should have reached the stage where he is not continually attracted by the good looks of the housewives he calls upon. Also, he should be more interested in succeeding in his work on account of having reached that stage in life wherein he is beginning the down grade unless he does attend strictly to business. In other words the older men are steady, want to make good because they know that the older they get the harder it will be for them to obtain profitable employment.

The young man must be handled carefully, for he is somewhat temperamental. If he feels he has been abused, he'll quit his job, assuming that he can get a job anywhere. The older man is more willing

to accept advice, is directional and dependable. He generally is thinking about making good in order to hold his job rather than forcing a sale by high pressure methods in order to get an extra ten dollars to spend with the boys the following night. He is careful of his clothing, and, while he may not dress in as extreme style as the younger salesman, he is just as neat in his appearance, conservative in the cut of his clothing and arouses more confidence in the man of the house.

It is really surprising how many times the man of the house takes aversion to a stylishly dressed young salesman. Husbands seem to feel that the stylishly dressed young salesman is a sport. That has been demonstrated on our sales floor numerous times.

Another reason for selecting the older men is that their years should have given them a wealth of experience upon which they may draw when presenting arguments in favor of electric refrigerators. We must remember that the day has passed when we must explain in detail the technical operation of an electric refrigerator to sell it. Pride of ownership, too, is passing as a sales method. Practicality and economy must be the new thoughts we stress. The older men remember the day when refrigeration was not as good as it was immediately prior to the advent of the electric refrigerator, for it hasn't been so many years since the use of ice in the home became common as a means of preserving food products. These men can remember when their mothers put the butter in the cellar, when the milk may have been lowered into the cistern. They can take the prospect upon a mental journey from the day of the spring house and the cave behind the kitchen door, down through the day of the iced refrigerator to the new and most convenient method—electric refrigeration—and paint the picture in colors seasoned from experience.

Summing up my conclusions and reasons for switching from young men to older men, I believe:—

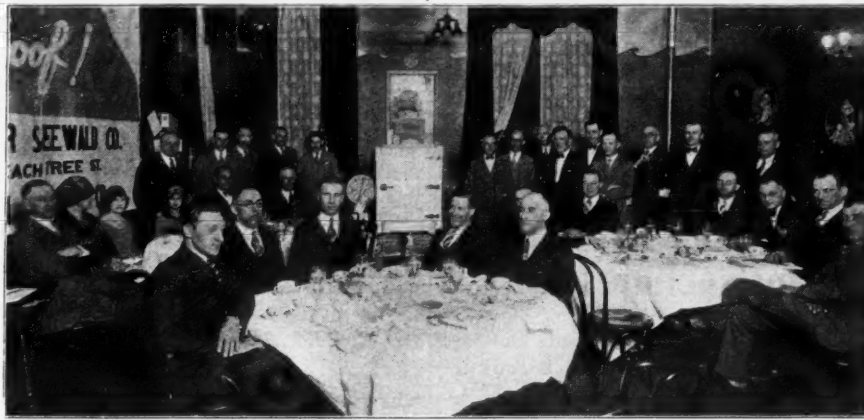
First:—That the older man will be more acceptable to the men of the house than young fellows. We must remember our largest potential market is among the young married couples—the new generation.

Second:—That the older man will devote his mental energies to the accomplishment of his task and will not let his mind wander the moment he sees a comely young housewife.

Third:—The older man is anxious to make good, for he is approaching that station in life when he is beginning upon the down grade.

Fourth:—The older man has a wealth of experience upon which he can draw for sales arguments. His experience instills confidence in the prospects.

South Bend G. E. Dealer Meeting Precedes Summer Campaign



Dealers and salesmen operating under E. R. McCarty, South Bend, Ind., General Electric distributor, discussed plans for summer sales at a dinner meeting held in South Bend recently.

BOY! PAGE SENATOR HEFLIN

Here is an installation that might well lay claim to the blue ribbon for co-operation. It was made by the Harrisburg-Copeland Company, Harrisburg, Pa., Copeland distributors and the machine was a Copeland-Seeger electric refrigerator.

It was sold to the Klu Klux Klan.

The sale was made by a Roman Catholic.

It was delivered by a couple of negro truckmen.

And the installation was made by a Hebrew.

Welsbach Demonstrates Simplicity of Equipment at N. E. L. A. Exhibit

The Welsbach Company, in its display at the N. E. L. A. Convention, demonstrated the simplicity of its equipment and the inoffensive nature of its refrigerant to the visiting members by periodically disassembling and reassembling an operating unit. Invitations to witness the demonstration were sent to many of the delegates. The operation occasioned much favorable comment.

The demonstration unit consisted of two complete refrigerating systems or "Snow-balls" operated by a single motor. On a back screen were spread the essential parts of the Welsbach system, particularly the internal or hidden parts. Mr. Reinhold Fehrenbach, an assistant engineer of the Welsbach Company, was in charge of the demonstration and invited his audiences to time the operation, which variously took from 16 to 23 minutes for the complete tear-down and reassembly.

The plan of operation involved the disconnection of one of the running units from the electric motor, the complete disassembly of the compressor whose parts were spread out on the table in front of the audiences, and subsequently reassembled. Attention was called to the advantages of the Welsbach system of flooded lubrication by the compressor was refilled with lubricant. Similarly, when the system was recharged, the inoffensive nature of the refrigerant was emphasized in conjunction with the manifold advantages of its low operating pressures. After reassembly, the compressor was reconnected to the system and placed in operation as evidenced by the rapid development of frost on the expansion coils of the reassembled system.

It was noted that the responsible executives of the various Utility Companies were sufficiently interested in the demonstration to remain in attendance during the entire operation. The simplicity of the Welsbach system and its attendant benefits were driven home to a remarkably effective degree by the physical demonstration as presented and by the talk given in conjunction with it.

Coquettish Cow Attracts Crowd to Showroom of Pittsfield Electric Co.

A mechanical cow that understands the technique of the coquette, raises and lowers her droopy eyelids, switches her tail and very audibly "moos" has been instrumental in bringing mothers and their children to a utility display in Pittsfield, Mass.

The cow is shown in the window of the Pittsfield Electric Co. On Saturday afternoons and evenings, however, the cow is placed in the showroom to demonstrate the relation of proper refrigeration to children's health. The quadruped was secured through the courtesy of a local milk company.

IMPORTANT FEATURES OF CABINET DESIGN DISCUSSED AT A. S. R. E. MEETING IN DETROIT

(Concluded from Page 21, Col. 4)

withstanding these facts there are tremendous quantities of natural wood finished refrigerators still manufactured. Is this condition consistent with the trend in design of kitchen and pantry equipment? It may be there is a market demand for the natural wood type, but who can say that the two-tone effect would not be more to the public liking? Is not the demand for natural wood finished cabinets due to the fact that such cabinets have been the regular product of refrigerator cabinet manufacturers; in a way an established precedent?

There are, of course, some cabinets made in various color effects, but they are by far the exception rather than the rule. The ultimate thought in mind is—realizing the fact that interior decoration of the kitchen and its equipment is no longer the natural wood type; what justification have we for manufacturing natural wood finished cabinets in the present quantities? Is it not true that we have lagged development in this respect also?

Durability

Durability is primarily dependent upon quality of design, workmanship and materials, and is not necessarily a function of its cost. Of prime importance is the durability of the insulation, in order that after years of service its coefficient of heat conductivity will remain the same. Comment has been previously made on this subject.

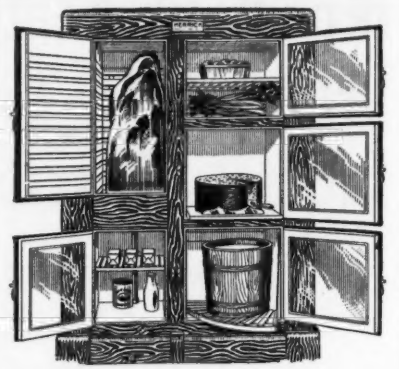
Many refrigerator cabinets have no supporting structure, i. e., they consist of four sides with top and bottom nailed together. While it is possible to make a relatively rugged and durable cabinet in some manner similar to this, it is believed the building of a supporting structure or frame upon which the finished panels are placed, tends towards greater durability. Especially is this true of the larger sized cabinets. This method is believed not only basically sound, but to lend itself easily to modern production methods. A little ingenuity used in the design will permit the insulation to overlap at the corners, thus eliminating a common source of heat leakage.

Durability of finish, both interior and exterior, is a highly desirable quality. The finish of natural wood exterior cabinets presents no difficult problem, providing reasonable care is used to prevent exterior sweating. The finish on sheet steel, either plated or unplated, is quite a problem unless a baked undercoat is used, for the foundation of the finished coats. Air dried undercoats are prone to chip and peel after a relatively short life. Probably the best class of finish of this type consists of a baked undercoat applied to thoroughly cleaned unplated sheet steel with several baked finished coats.

Adaptation to Mechanical Refrigeration

In general, it may be said a refrigerator cabinet satisfactorily operating with ice for cooling, may also operate satisfactorily with mechanical refrigeration. That is, assuming the dimensional characteristics of the cabinet permit the use of the correct size of mechanical unit and that the term satisfactorily implies the same merits in both cases. A refrigerator which develops no odor using ice is not liable to develop an objectionable odor with mechanical refrigeration. On the other hand, a cabinet developing slight odors using ice, is likely to have more noticeable and objectionable odors when using mechanical refrigeration. A general rule satisfactory mechanical refrigeration may be applied to refrigerators operating satisfactorily with ice.

Some companies are featuring a so-called baffle, sold as an accessory, used to cover the ice chamber opening when a cooling unit is installed. An opening in the baffle is left for the purpose of withdrawing and depositing the ice cube trays. The purpose of the baffle is to present a more finished appearance when the cooling chamber door is opened. Incidentally it acts as an air deflector, probably improving circulation slightly.



HERRICK COMMERCIAL REFRIGERATORS

Best results will be obtained if your unit is installed in the HERRICK

Write for full details

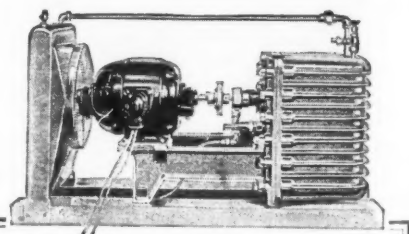
CATALOG No. 38

Residence and Apartment Models

CATALOG No. 28

Commercial Models

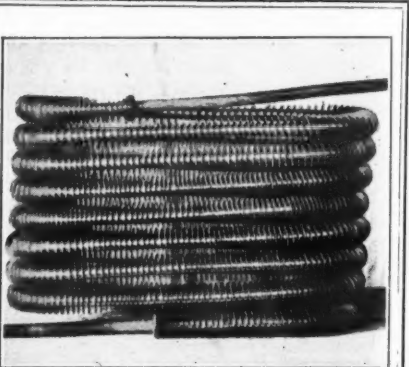
Herrick Refrigerator Co.
1019 Cedar St., WATERLOO, IOWA



If you are interested in handling the local sale of a really revolutionary electric refrigeration system in which the usual "trouble factor" has been reduced to an absolute minimum, write for Bulletins "A" and "B," describing the Haven System for domestic, commercial, and farm milk cooling service.

HAVEN MANUFACTURING CO.,
Milwaukee, Wisconsin

HAVEN Electric Refrigeration



ROME CONDENSERS

are formed in any shape of one piece of seamless copper tubing, fitted with heavy gauge copper radiating fin. Rome condensers are five times as efficient as plain tubes

Rome-Turney Radiator Company
ROME, N. Y.



PEERLESS FLOODED TYPE EVAPORATORS

For use on either Methyl Chloride or Sulphur Dioxide.

The PEERLESS one-piece, galvanized casting cooling unit provides the quick freezing advantage of the direct expansion unit with the hold-over advantage of the brine tank. The entire casting is cored, and ice trays are placed directly over the boiling refrigerant, giving an exceptionally short "freezing time."

The entire surface of the unit is "cooling surface," available in maintaining correct refrigeration temperatures at a minimum power cost. Shut-off valves are "dangled" to the float valve assembly, repairs and adjustments are made quickly with no trouble. A large capacity strainer is incorporated between the liquid shut-off valve and the "needle" valve. This can be removed and cleaned without loss of refrigerant. Manufactured in sizes and cube capacities to meet every condition.

PEERLESS ICE MACHINE CO.
515 W. 35th St. CHICAGO, ILL.

Central Station Display in Connecticut



Frigidaire display in Hartford office of the Connecticut Power & Light Co.

Winter Arguments for All-Year Refrigeration Are Also Effective During the Summer Months

Central Station Salesman Emphasizes Food Saving as a 365-Day Investment

By Willis Parker

AND now comes the season of the year when the electric refrigerator salesman will be discarding the arguments he used during the winter for the winter sales of modern refrigeration, in favor of the more seasonable and more likely arguments on the need of such conveniences. He will base his arguments upon the spoilage of food products in the heat of summer, on the inconvenience of the ice-man's periodical visits, on the advantages of frozen desserts on the hot days, etc., and probably will forget that some of the winter time arguments are just as good in the summer as in the winter and, in fact, they should be presented, for there are many prospects who will declare that their summer seasons are short, that a modern refrigerator is needed only three, four or five months out of the year.

Electric refrigeration should be sold as an all-year-around convenience, declares Vernon Crebbs of the electric refrigeration department of the United Power & Light Company, Hutchinson, Kansas. Showing the need of an electric refrigerator 365 days out of the year, instead of for the warm months, proves to the prospect that the investment demanded for such a convenience is none too high, in case the price objection should be raised.

The average housewife may assert that she buys no more food products in the winter than she does any other season of the year. But if you check her up, says Mr. Crebbs, you can usually prove that she unconsciously buys heavier in the cold weather than she does in the summer, probably because of the inherent instinct to store food against a day when she will be prevented by storms from visiting her grocer. Likewise, she instinctively feels that when the weather is cold she can keep food products easy and therefore she should be able to buy in larger quantities

and save on the price. A further check will show that the housewife wastes more food in the winter than she does in summer and likewise throws out more food, because of spoilage than she does at other seasons of the year. Mr. Crebbs goes as far as to declare that many housewives buy twice as many groceries in the winter time and throws out twice as much as she does in the summer.

Why all this waste? Simply because there are very few days in the year when the temperature does not fluctuate considerably. In Hutchinson, he believes that there are not more than 14 days in the winter when the temperature is proper for the maximum safe-keeping of foods. Freezing and thawing ruin foods, and even in the 14 days suitable for food protection, it is not safe because the days are not consecutive—they are widely scattered over the mid-winter weeks.

Arguments along these lines should be presented in the summer along with the arguments successful during the summer, for the more you show the practicability and economy of an electric refrigerator all the year around, the easier it is to sell the unit because the housewife and her husband can readily see that the investment may be and should be scattered over a full year instead of merely the summer months.

When one stops to consider that, with the modern merchandising methods available, it is possible for a family to buy in exceptionally small quantities and consume the food products before they are badly spoiled, and that there is more waste in the winter than in the summer, it would appear that the best time to sell electric refrigeration is in the winter. Theoretically, yes; practically, no, for it usually takes the heat of the summer to arouse a desire for something cold.

Mr. Crebbs is one of the more successful electric refrigerator salesmen. This is probably because he picks his prospects carefully and determines a characteristic, individualistic line of argument that fits the case precisely. His experiences have proven that the middle-aged people are the best prospects. This is because they have had years of experience with the use of ice and know what you are talking about when you suggest that the ice-man's muddy feet, the dripping cake of ice he brings into the kitchen are not conducive to good housekeeping; that the continual worry regarding whether or not the ice in the box will last until the ice-man comes again is not joy building. The younger married couples, are not blessed with such experiences. Perhaps the young woman never has had the responsibilities of running a kitchen and conserving foods. If an electric refrigerator appeals to her, it appeals from the standpoint of pride of possession.

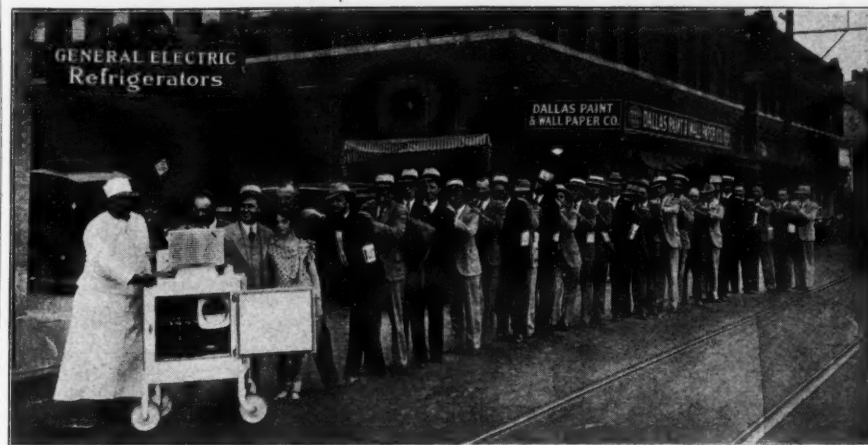
In addition, Mr. Crebbs has discovered that people who have used ice are easier to sell than those who have never used it before and the reason they never used ice probably is because of a false sense of economy.

"Did you ever use a microscope to sell an electric refrigerator?" Mr. Crebbs asked. Perhaps some salesmen have but for the benefit of those who have not, the microscope is used to show the housewife the advantages of a dry cold in the preservation of food over a wet or damp cold as is provided by the use of ice. "If you take a high powered microscope," explained Mr. Crebbs, "you may take a piece of meat or a bowl of cold potatoes out of her ice box and show her the vegetable mold that is growing in the food, for a damp cold of temperature provided by ice is just the kind of conditions the mold best thrives under. I have used this as a conclusive argument, but do not advise it except as a last resort, for I once made a prospect mighty sore in as much as she felt that I was insinuating that she wasn't a clean housekeeper."

Mr. Crebbs follows a rather interesting procedure in arranging for interviews with his prospects. It takes three calls, according to his system, to make the appointment for an interview with the prospect after supper, for it is in the evening that the sales of refrigerators are most frequently made.

"I first call upon the housewife," explained Mr. Crebbs, "and interest her. Then I call upon her husband at his place of business and interest him. I want them both together when I present my sales talk. Then I call on the woman again and let her set the time for my visit."

Dallas Salesmen Show How They Are "Pushing" General Electric



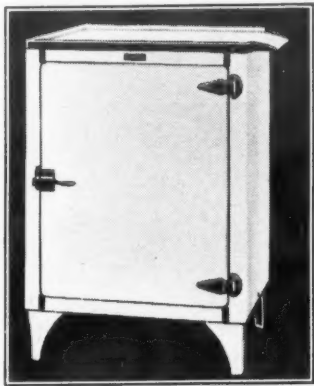
Following a recent meeting of dealers and salesmen of A. C. Rogers, Dallas, General Electric distributor, the group paraded through the city pushing an Ambassador model G. E. unit.

BENJAMIN ANNOUNCES ALL-PORCELAIN APARTMENT MODEL CABINETS

Benjamin Electric Mfg. Co., 128 S. Sangamon St., Chicago, Ill., announces a complete line of all-porcelain apartment model cabinets designed especially for electric refrigeration and to accommodate any standard mechanical cooling unit.

The line consists of five models varying in design as to intended use, such as with machine compartment for installation of refrigerating unit in cabinet; and without machine compartment for remote installation. There is also a choice of models embodying vegetable storage compartment, drain board top, and cast iron porcelain enameled legs.

Each cabinet is of white porcelain



Model 539 equipped with drain board top.

enamel, inside and out, fused into rust-resisting iron; and is designed with rounded radius corners and black porcelain trim around top and on edge of door frame. Food compartment is seamless porcelain and rests on a level with door sill, facilitating cleaning. Interior of cabinet is equipped with hangers, baffle, front, shelves and defrosting tray to suit standard makes of cooling units. Hardware consists of heavily nickel-plated brass hinges, sturdy tin-plated wire shelves, rust-proof floor slides (six-inch cast iron porcelain enameled legs on two models) and positive, self-acting, trip-lock door fastener. Insulation throughout is of 2-inch pure sheet corkboard, with additional feature of compression gasket fitted on door, thereby completely sealing the interior of the cabinet.

WOLVERINE TUBE CO. STOCKS LISTED ON DETROIT EXCHANGE

Common and preferred stocks of the Wolverine Tube Company have recently been listed on the Detroit Exchange. Previous to this the stock has been privately held but the rapid expansion of Wolverine manufacturing schedules warranted a greater financial structure in anticipation of future growth. Capitalization consists of \$293,500 first mortgage bonds, \$425,000 7% preferred stock and 113,535 shares of common stock. Earnings have grown year by year, net for common in 1927 being \$2.04 a share, and on basis of earnings the first quarter of 1928 were at the annual rate of \$2.24 a share.

Although the Wolverine Tube Company is little more than ten years old, it is now rated as the world's largest producer of small diameter copper, brass and aluminum tubing. Sales have increased from \$126,000 in 1917 to \$3,437,999.75 in the year 1927. The working areas of the Wolverine plant total nearly 6 acres, principally devoted to tube drawing and annealing equipment, but including special departments for fabricating products or machine parts made of tubing.

Manufacturers of electric refrigeration,

automobiles, hot water heaters, adding machines, plumbing supplies and cash registers are the principal volume purchasers of tubing. The activities of the Company are directed by Charles C. Limbicker and Harry J. Hooks, both of whom had successful experience in the same field for several years prior to the formation of the Wolverine Tube Company in 1916.

G. E. WHOLESALE MEN CONVENE AT CLEVELAND

Between twenty-five and thirty wholesale refrigeration sales managers are attending a three day convention at Cleveland in the offices of the General Electric refrigeration department, starting today.

These men in the employ of distributors in all parts of the United States are assembled to confer and exchange ideas on the organization and management of wholesale departments.

The group will be addressed by the following members of the Cleveland office on the various phases of merchandising—T. K. Quinn, manager, P. B. Zimmerman, sales manager, O. C. Hamilton, W. M. Timmerman, J. J. Kehoe, G. C. Wasson, H. H. Bosworth, W. J. Daily, J. J. Donovan, C. E. Boesch, J. T. Dickson, L. R. Edwards and W. E. Heibel. W. E. Underwood of Lord and Thomas and Logan, New York City, will talk on advertising.

The group will be taken to Nela Park where they will be told about sign lighting by W. M. Potter; store lighting by Walter Sturrock, and will be shown through the model electrical home by L. C. Kent.

J. E. North, president of the Cleveland Electrical League will address the wholesale managers at a luncheon to be held in the League Club rooms at the Hotel Statler. This is the first of two wholesale manager's conferences. The second will also be a three day conference starting June 27.

SERVEL BUILDS PRIDE IN LOCAL INDUSTRY THROUGH NEWSPAPERS

The influence of industry as factor for prosperous community growth, and how communities benefit as industries expand is made the theme of a series of 13 editorial-style newspaper advertisements whereby Servel, Inc., manufacturers of Servel electric and Electrolux gas refrigerators, Evansville, Ind., aims to bring home to the people of the city, the potent character of an industry which in all departments employs 2,250 people representing an annual payroll of \$3,600,000. Each advertisement, in editorial fashion, embodies a lesson on the close relation of Servel industry to community progress.

The appearance of the first ad elicited local newspaper editorial comment. As expressed by the editor of the *Evansville Courier*, "It is easily apparent that this sort of advertising is going to do as much towards selling Evansville to Evansville people, as it will towards selling Servel, Inc., and its products to Evansville. Servel points out the fact that communities grow as their industries grow."

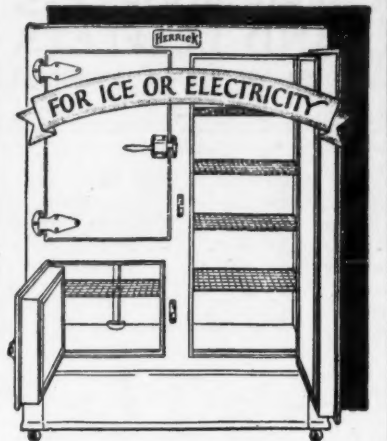
Calling attention to the fact that the company can report a large number of orders and steadily increasing sales of refrigerators in many states of the Union, Servel remarks, "naturally this is good news for the community and therefore good news to you (the reader) for individual welfare, community welfare and the welfare of Evansville's industries are inseparably bound together."

Model Homes

A Kelvinator will be on display in the model home erected by H. A. Foster at 17311 Turner Ave., Detroit.

General Electric refrigerators will make up part of the display in all the Master Model Homes in Detroit.

A number of English duplexes that are being built in the Cleveland subdivision, O., will have electric refrigerators.



It's the CABINET that Counts!

Best results will be obtained if your unit is installed in the HERRICK

HOUSEHOLD and COMMERCIAL REFRIGERATORS For Electric Refrigeration

HERRICK REFRIGERATOR CO. 1019 Cedar St., Waterloo, Iowa.

FLINTLOCK CONDENSERS

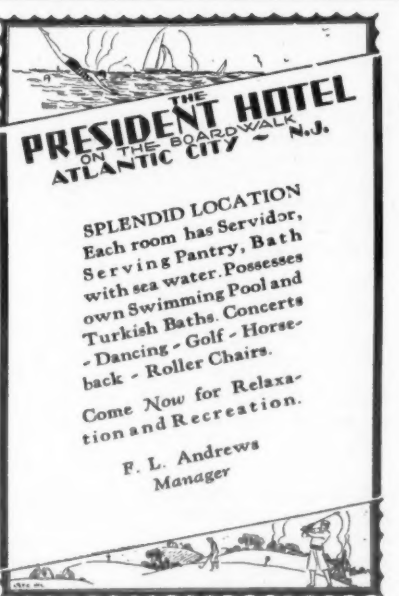
Efficient—Economical Compact

Greater Efficiency at Less Cost

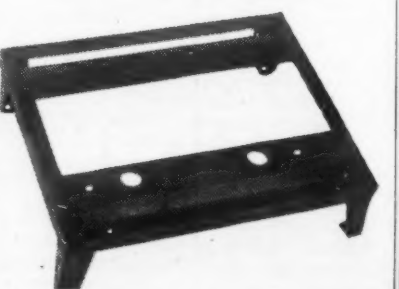
WRITE FOR OUR BOOKLET

FLINTLOCK CORPORATION

4461 W. Jefferson Ave. DETROIT, - - MICH.



Refrigeration Stampings



Angle iron supporting bases for freezer units. Electrically arc welded—built to your specifications.

Metal guards to cover units.

We invite your inquiries on any sheet metal requirements.

Motors Metal Mfg. Co. DETROIT, MICH.

The Filtrine Filter
assures
pure, clear water
from your
FRIGIDAIRE
Water Cooler
WRITE FOR DETAILS
FILTRINE
MANUFACTURING COMPANY
49 LEXINGTON AVE., BROOKLYN, N.Y.
Manufacturers of FILTERS & COOLERS of all sizes.

ARTIFICIAL FOODS
Endorsed By
General Electric Co.
Copeland Sales Co.
Trutlife Wax Products Co.
27 Erie St., Milwaukee, Wis.

NORTHEY
Freezer, Display Cases, Coolers and
REFRIGERATORS
FOR ALL PURPOSES
ANY SIZE, STYLE OR FINISH
NORTHEY MFG. CO.
WATERLOO, IOWA
Agencies in most large cities Wat. also direct to you

VALVES
KERO TEST
FORGED BRASS VALVES
for Mechanical Refrigeration
Quality Shut-off and Cylinder
valves in any standard designs
or to your specifications.
KEROTEST MANUFACTURING CO.
2525 LIBERTY AVENUE
PITTSBURGH, PENNA.